PlateStream

Platesetter

Click on desired manual:

- Quick Start Guide
- Installation Guide
- Operator Manual
- Service Manual
- Illustrated Parts List

Printware

LEADERS IN COMPUTER TO PLATE

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Thumbnails

PlateStream SC

Platesetter

Quick Start Guide

Printware

LEADERS IN COMPUTER TO PLATE

700631 Rev B

Main Menu

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Introduction

For detailed procedures on the control panel, plate media and chemistry, preventive maintenance, and trouble-shooting, see the PlateStream SC Operator Manual.

Before making a plate, the Platesetter must be:

- Connected to the RIP—the I/O connectors are located on the rear of the top cover of the machine.
- Ready to accept a job (Main Menu displayed on the control panel, On-Line state, no error conditions).
- The processing tanks must be filled to proper levels.

Loading Plate Material

1. Open the top cover. Raise marker by pulling the marker lever up until lever stops. Gently lift up marker. If you are replacing the roll of plate media, the last of the previouos roll may need to be removed from the platesetter.

2. Remove the spool assembly from the Platesetter.

3. Adjust the **rear** edge guide inside the Platesetter by pulling the edge guide knobs out and sliding to the position closest to the plate media width. Adjust the **front** edge guide by loosening the screws and moving the guide all the way to the front.

4. Adjust the left hub on the spool shaft to match the edge guide position by squeezing the clip and sliding on shaft. Remove the right hub from the shaft by lifting clip and sliding off the shaft. Slide media onto shaft. Slide the right hub onto shaft by lifting clip and pushing down on spool until spool is tight against media (see Figure QS-1).

5. Place the spool assembly back onto the receptacles in the Platesetter. Feed media through rollers and two edge guides. Adjust the front edge guide by turning edge guide knob counterclockwise and sliding edge guide until edge guide rests against plate media. Lock edge guide by turning knobs clockwise. Feed the media by hand up to the nip of the capstan roller and engage (hold down) the load switch for approximately 5 seconds. Watch so that the feed side of the capstan roller picks up on the media and begins to transport it. After the media has fed past the exit side pinch roller, release the load switch. Manually turn the exit side pinch roller approximately 2 revolutions counterclockwise to remove the loop, which may have formed over the capstan roller during the load. This last step will help the registration of the first few plates output from the platesetter after this load sequecnce as compared with previously output plates or ones that may be output later.

6. Gently lower the marker and lock down by pushing the marker down until the lever is horizontal. Close the top cover.

7. Set the plate width from the control panel setup menu. Load media from the control panel. Image one test plate from the control panel Test Plate menu.

Main Menu

Control Panel Setup Menu

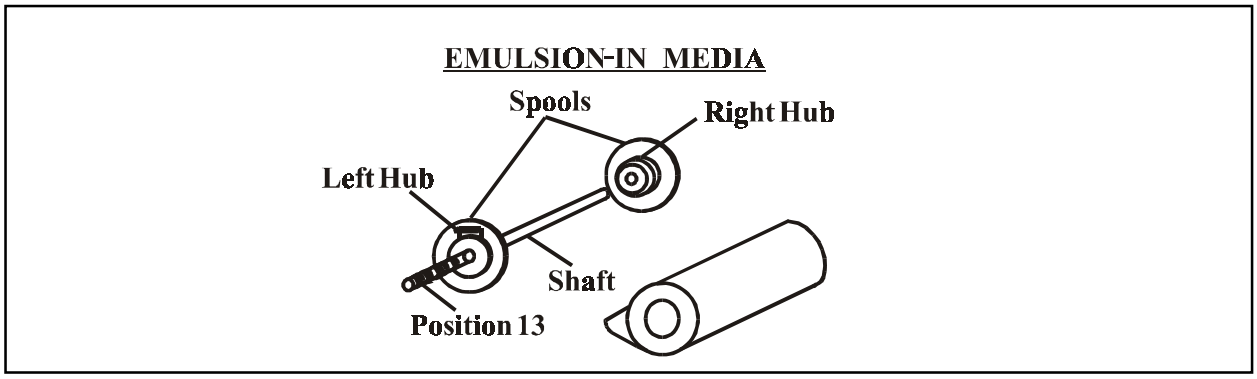
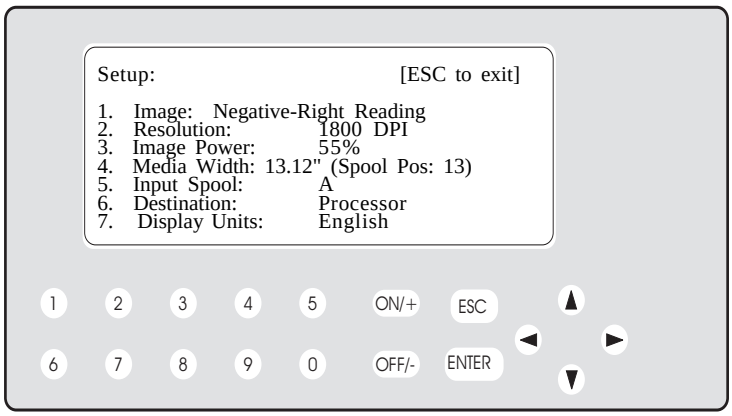


Figure QS-1. Loading Plate Media on Spool

The control panel Setup Menu (below) lists fixed and changeable options for changing various Platesetter parameters.


Setup: [ESC to exit]
1. Image: Negative-Right Reading
2. Resolution: 1800 DPI
3. Image Power: 55%
4. Media Width: 13.12" (Spool Pos: 13)
5. Input Spool: A
6. Destination: Processor
7. Display Units: English
1 2 3 4 5 ON/+ ESC
6 7 8 9 0 OFF/- ENTER

1. Image – Sets the type of imaging. The choices are: Positive or Negative Wrong Reading, and Positive or Negative Right Reading. The default is Negative-Right reading for plate media.

2. Resolution – Preset at 2400 DPI.

3. Image Power – Sets the image power (laser intensity).

4. Media Width: xx.xx" (Spool Pos: yy) — Media Width is the exact width, entered by the operator, from 7.00" to 13.40" (17.78 cm to 34.00 cm). Spool Pos indicates the position to set the spool or cassette. Spool position is set at the media width in inches, rounded to the nearest inch, from 7 to 13.

5. Input Spool – Specifies the input spool. The choices are: A, B, C, D.

6. Destination – Preset at "Processor."

7. Display Units – Toggles between English and Metric display units.

Main Menu

ZAPrip HQ (Harlequin) RIP Setup; Imaging Plates

1. Startup the RIP

a. Connect the RIP to the network and turn it on.

b. Press ctrl-alt-del on the RIP to log into *Windows NT.*

c. Log in as **Administrator** with password: **printware**.

d. Double-click on the **Navigator** icon to launch the RIP.

2. Create appropriate page setup(s) in Page Setup Manager

a. Ensure that the "Negative" box is unchecked.

b. Specify plate size and image positioning in the **page layout** menu.

c. You can specify screens in the **Screening** menu, or leave it at factory defaults: **Override frequency** and **spot function**; **Euclidean Spot Function**; 100 to 150 **lpi frequency**; the default **Angles**; **Use Harlequin Precision Screening**; and **Rotate screens according to Page Rotation.**

3. Publish the Page Setup on the network in Input Controller

The name associated with the Page Setup in Input Controller will show up on the front-end computer.

Note: You may want to specify a name which incorporates resolution, plate size, or the target press (*e.g.*, "Quickmaster2up2400dpi").

4. Choose **Start Inputs** (the green traffic light icon) from the RIP menu.

5. Set up the front-end computer to print to the RIP

For best results, use the *Adobe* print driver and PlateStream PPD. These are provided with the RIP. If you don't have the Adobe driver, the Linotype 630 driver can be used.

Note: On Windows front-ends, specify the platesetter as a **Local Printer** not a "Network Printer." This allows selection of the correct spool folder at print time.

6. Print the Job

a. On **Mac** front-ends, ensure that the appropriate device name has been selected in Chooser, and print normally from the application. Do not specify screens or resolution in the application.

b. On **Windows** front-ends, print to file from the application using the printer set up in step 3 (the default printer name is PlateStream when using the PlateStream PPD). Select the ZAPrip HQ and the appropriate hot folder (**Quickmaster2up2400dpi** in our example) as the destination by browsing **Network Neighborhood**. Select the PlateStream PPD if the application supports PPDs. Do not specify screens or resolution in the application.

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PlateStream SC

Platesetter

Installation Manual

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INSTALLATION GUIDE

Pre-Installation Checklist

1. Confirm Electrical Requirements

Verify that the electrical power of the required voltage and current is available at the machine location. Verify an Ethernet network drop is available at the RIP location. The RIP requires a 10-Base-T or thin coaxial cable. The Platesetter requires a dedicated 200-240 VAC 20-amp, 60Hz three-wire single-phase electrical line. The platesetter can be switched to 50 Hz operation. A 100-120 VAC 15-amp, 50/60Hz line with a power strip is required for the Raster Image Processor (RIP). The RIP can be switched to 200-240 VAC operation.

The Platesetter is shipped without a power plug. The Platesetter power cord length is approximately 9'. The power plug used with the Platesetter must be rated for 20-amp 250-volt power and should have the proper safety certification for the country of use. The electrical wiring color codes are:

	North America	**International**
• Line:	Black	Brown
• Neutral:	White	Blue
• Ground:	Green	Green/Yellow

Verify that an electrician is available if needed.

2. Confirm Supply of Recommended Consumables

Have at least 16 gallons each of working Activator and Stabilizer on hand.

Have plate media available as required. Plate media may be either paper- or polyester-based. Roll width may be from 7” to 13.4” (17.8 cm to 34.0 cm). The maximum roll length is 280’ (85m).

3. Confirm Arrival of the Platesetter

Verify the machine will be at the installation site (final location, loading dock, storage area, etc.) before scheduling installation. The Platesetter should be initially installed by an authorized service technician.

I-2

Recommended Supplies

RECOMMENDED CONSUMABLES FOR PLATESTREAM

PRINTWARE: SILVERSTREAM+

RED LIGHT PLATE MEDIA:

	Emulsion In
5 mil polyester	808555-XXX (280 FT ROLLS)
8 mil polyester	808666-XXX (280 FT ROLLS)

(Note: -XXX specifies the specific roll width from 7" to 13.4")

CHEMISTRY:

ACTIVATOR: 808777-001
STABILIZER: 808777-002

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4. Verify Final Location

Select a suitable place for installation. Avoid excessive dust, vibration, and direct sunlight. The Platesetter is designed for use in a prepress environment. Acceptable ambient temperature range is 65°F to 80°F (18°C to 27°C) and acceptable relative humidity is 45 to 70%.

Check the necessary dimensions at the physical installation site (e.g. width of doors, etc.) with the Platesetter dimensions. To ensure optimal operation allow clearances of at least 12" (30 cm) on the left, 24" (75 cm) on the right, 30" (75 cm) in front, and 12" (30 cm) in the rear (see Figure I-1). After uncrating, the depth of the Platesetter (which is on casters) is approximately 33" (84 cm).

If a method for plumbing to remove chemical effluence is required, the method must meet local environmental codes. An optional drain for the chemicals provided with the Platesetter is a vinyl flexible hose, 6' long, 1 1/4" outer diameter, and 1" inner diameter.

Precautions

1. Due to the 500 lb. (227 kg) weight of the Platesetter, use caution when removing Platesetter from pallet.

2. Follow electrostatic discharge (ESD) protective procedures when connecting cables or working near Platesetter PCAs, including:

- Ground yourself by touching the metal chassis of the Platesetter before connecting or disconnecting any cable.
- Use a wrist strap and an antistatic work surface, if possible, when handling PCAs or other electronic components.
- Always store and transport PCAs in antistatic bags.

Unpacking and Inspection

Keep all the shipping boxes, braces, crates, and packing pieces in case the Platesetter needs to be repackaged.

1. Inspect the Platesetter crate for signs of shipping damage. Report any damage discovered to the carrier immediately.

2. Remove the strapping, ramp, and the top cover from the crate.

3. Remove the cardboard sides.

4. Attach the ramp to bottom of the crate using the two pegs located on either short side of the crate.

5. Remove the plastic wrapping from the unit.

Main Menu

6. Remove screws from the four wood blocks mounted to the bottom of the crate. Remove blocks by slightly lifting the Platesetter.

7. Roll the Platesetter down the ramp and on to the floor carefully.

Assembling the Platesetter

1. Carefully open the carton containing the marker assembly.

2. Remove the second cardboard cover from the marker assembly.

3. Cut tie strap.

4. Identify the front and rear of the marker assembly (the front has a warning label and serial number; the rear has a grounding strap and welded hinge brackets).

****

CAUTION: Do not set the laser marker assembly down on a flat surface. This can damage the resonant galvanometer on the side of the assembly.

****

5. Raise the top cover. Remove tie straps and bubble pack from struts. Remove the caps on the outside of each strut head.

6. Locate the hinge shaft for attaching the marker assembly at the top inside left rear of the Platesetter.

7. Have two people lift the marker assembly from the carton using the C-shaped black handle located on the laser end of the marker. Place the marker assembly in the Imager by placing the hinge brackets on the hinge shaft (not on the brass bushings).

8. Slide the marker assembly mounting clip onto the spring-loaded brass bushing closest to the Processor.

9. Lift the other end of the marker assembly and place it past the brass bushing. Slide the brass bushing into place.

10. Remove the long 1" wide piece of black tape from the bottom of the marker assembly by gently pulling on the loose end of the tape. Remove the C-shaped black shipping support by removing the eight screws holding this support.

11. To attach the struts to the marker assembly:

- Raise the marker assembly until the ball joints on the outside line up with the strut heads.
- Firmly push the strut heads onto the ball joints and reattach the caps to lock the struts to the marker assembly.

12. Gently lower the marker assembly and lock by pushing the marker lever down until lever is horizontal.

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13. Remove bubble pack from cables. Connect the cables to the marker assembly as follows:

• Connect the grounding strap from the rear of the marker assembly to the Imager unit frame.

• Connect the 10-wire connector to connector J6 on the printed circuit card (PCA) assembly located on top of the marker assembly.

• Connect the ribbon cable from the rear I/O panel to connector J8 on the PCA.

• Connect the ribbon cable from the harness assembly to J9 on the PCA.

14. Open accessory boxes and remove bubble pack from contents. The contents should include:

a. The RIP and PlateStream manuals on CD's.
b. Two optional plastic replenishment tanks and optional small replenishment cart.
c. Effluent tank
d. A wire tray.
e. Two media spools and one media shaft.
f. Tube with plate samples.

15. Insert wire tray into slots located on the top right side of the Platesetter.

16. Attach customer supplied power plug to Platesetter power cord located in the rear of the machine per electrical wiring codes.

Assembling the Processor

1. Remove black tape holding the activator and stabilizer racks. Remove the four styrofoam pieces located in the front and rear of the processor working tanks inside the Platesetter. Remove bubble pack wrapped around Cover E, Guide F, and overflow tubes.

2. Place the overflow tubes in the large holes located in the rear of the processor working tanks, inside the Platesetter. Press down until overflow tubes stop. Place the spring pin from Guide F into the hole located in the rear of the activator tank while placing the other pin into the hole located in the rear of the stabilizer tank. Slide Guide F towards the rear of the Platesetter while placing pins on the other side of Guide F into the holes located in the front of the activator and stabilizer racks.

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3. Place the two optional replenishment tanks on the optional smaller cart.

4. If necessary prepare the Activator and the Stabilizer solutions in the replenishment tanks following the manufacturers instructions. Fill the processor working tanks inside the Platesetter and the replenishment tanks with the solutions.

   Make sure the activator tank is filled with activator and the stabilizer tank is filled with stabilizer. Place Cover E over processor working tanks.

5. Remove the bubble pack from the replenishment probes located underneath the processor and insert probes into the replenishment tanks by screwing on the white cap. Remove the bubble pack from the optional effluent probe located underneath the processor and insert probe into the hole on top of the effluent tank.

6. Rotate the gears in the activator and stabilizer racks several times to free them up before operating the Platesetter. Close the top cover.

Installing the Raster Image Processor (RIP)

1. Unpack the RIP central processing unit (CPU) and inspect it for any obvious physical damage. If any component appears damaged, notify the carrier immediately.

2. Unpack the RIP keyboard.

3. Unpack the RIP monitor.

4. Plug the monitor cable into the back of the RIP CPU (this cable should fit only one way).

5. Connect the keyboard cable to the keyboard connector on the back of the RIP CPU.

6. Attach the network cable to the network interface connector on the back of the RIP CPU.

7. Plug in the RIP electrical power cord(s).

8. Connect the two interface cables between the RIP CPU and the Platesetter. The Platesetter I/O Panel is located on the top rear of the machine (see Figure I-1).

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Turning On the Platesetter

1. The power switch for the Platesetter is located on the rear of the machine. To turn on the Platesetter, flip the switch up (see Figure I-1).

- Each time the Platesetter power switch is turned on, the Platesetter performs a series of tests of its internal components. If an error message appears on the control panel, see the section **Responding to Control Panel Error Messages** in the *PlateStream Operator Manual*. If the display stops at any initialization point for more than five minutes, turn off the Platesetter and call for authorized service.
- The Platesetter boot-up procedure takes approximately four minutes. If best absolute accuracy is required, allow six hours for the Platesetter to reach operating temperature.
- Once the power up sequence is successfully completed, the control panel screen will show the main menu with On Line mode indicated and no error messages displayed.

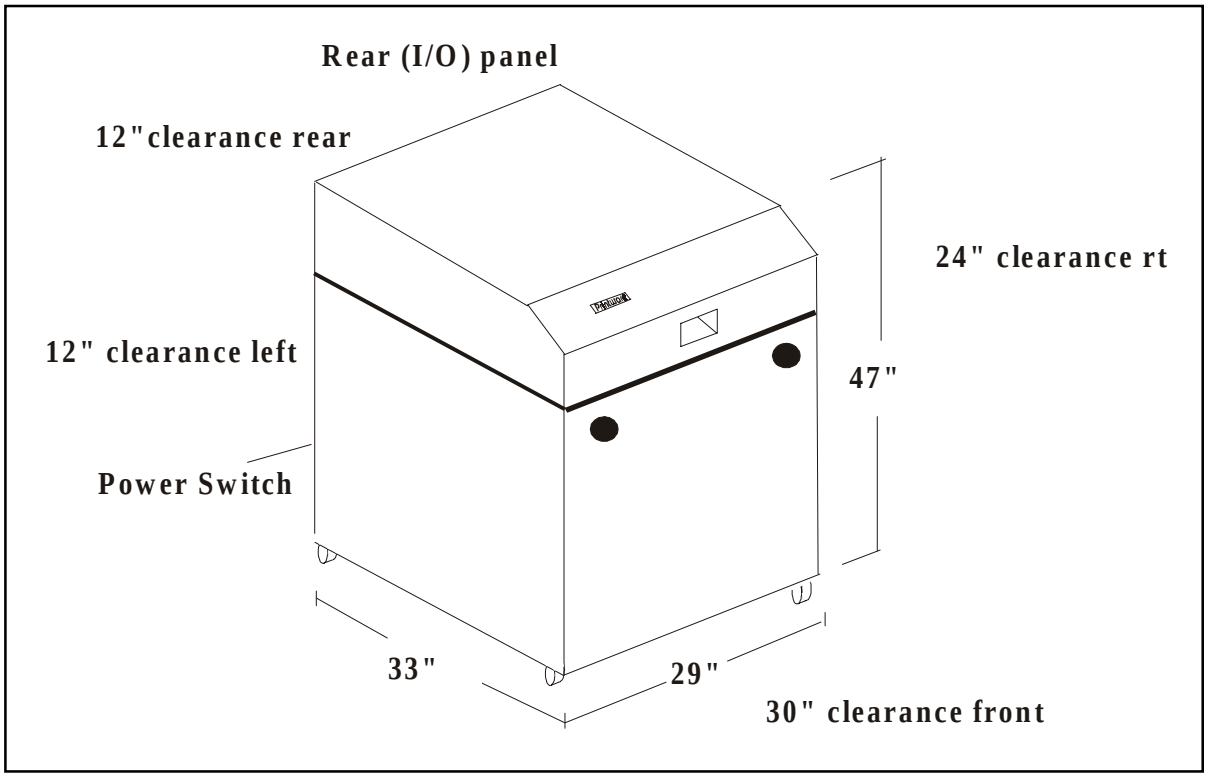

Figure I-1. Size and clearances for the Platesetter

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Loading Plate Media

1. Open the top cover. Raise marker by pulling marker lever up until lever stops. Lift up marker gently.

2. Remove the spool assembly from the Platesetter.

3. Adjust the **rear** edge guides inside the Platesetter by pulling the edge guide knob up and sliding to the position closest to the plate media width. Adjust the **front** edge guide by loosening the screw and moving the guide all the way to the front.

4. Adjust the left hub on the spool shaft to match the edge guide position by squeezing the clip and sliding on shaft. Remove the right hub from the shaft by lifting clip and sliding off the shaft. Slide media onto shaft. Slide the right hub onto shaft by lifting clip and pushing down on spool until spool is tight against media (see Figure I-2).

5. Place the spool assembly back onto the receptacles in the Platesetter. Feed media through rollers and two edge guides. Adjust the front edge guide by turning edge guide knob counterclockwise and sliding edge guide until edge guide rests against plate media. Lock edge guide by turning knob clockwise. Feed the media by hand up to the nip of the capstan roller and engage (hold down) the load switch. Watch so that the feed side of the capstan roller picks up on the media and begins to transport it. After the media has fed past the exit side pinch roller, release the load switch. Manually turn the exit side pinch roller approximately 2 revolutions counterclockwise to remove the loop, which may have formed over the capstan roller during the load. This last step will help the registration of the first few plates that are output from the platesetter after this load sequence as compared with plates processed previous to this load or plates that may be processed later.

6. Gently lower the marker and lock by pushing marker lever down until the lever is horizontal. Close the top cover.

7. Set the plate width from the control panel setup menu. Load media from the control panel. Image one test plate from the control panel Test Plate menu.

NOTES:

- Cut off any punched area of plate before reloading to ensure a reliable load.
- Media must be reloaded after jams or other fault conditions. In this case, a message will appear on the operator panel to “Reload Media” or “Manually Reload Media.”
- Media must be loaded with no tears or wrinkles.

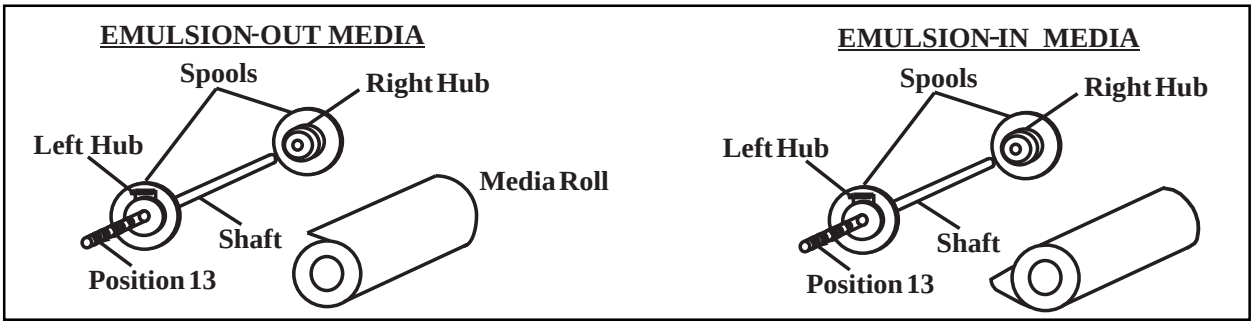

Figure I-2. Loading Plate Media on Spool

Main Menu

Setting Replenishment Rates

1. Remove front panel and remove replenishment hoses from the working tanks inside the processor. Place the replenishment hoses in measurement containers.

2. From the control panel run a test plate that represents the average plate size that will be run on this Platesetter.

3. Compare the measured volume to the table outlined below. Recommended replenishment rates are as follows:

Printware SilverStream+
Activator or Stabilizer 0.37 ounces/ft² (120 ml/M²)

Agfa Setprint Plus
Activator or Stabilizer 0.37 ounces/ft² (120 ml/M²)

Mitsubishi Silver DigiPlate
Activator: 0.47 ounces/ft² (150 ml/M²)
Stabilizer: 0.63 ounces/ft² (200 ml/M²)

	Average Plate Size								
	0.6 ft² 0.06M²	**0.8 ft²** 0.07M²	**1.0 ft²** 0.09 M²	**1.2 ft²** 0.11 M²	**1.4 ft²** 0.13 M²	**1.6 ft²** 0.15 M²	**1.8 ft²** 0.17 M²	**2.0 ft²** 0.19 M²	**2.5 ft²** 0.23 M²
Printware SilverStream+									
Activator & Stabilizer oz	.23	.30	.38	.45	.53	.60	.68	.75	.94
Activator & Stabilizer ml	6.7	8.9	11.2	13.4	15.6	17.8	20.1	22.3	27.9
Agfa Setprint Plus									
Activator & Stabilizer oz	.23	.30	.38	.45	.53	.60	.68	.75	.94
Activator & Stabilizer ml	6.7	8.9	11.2	13.4	15.6	17.8	20.1	22.3	27.9
Mitsubishi Silver DigiPlate									
Activator ounces	.28	.38	.47	.57	.66	.75	.85	.94	1.18
Stabilizer ounces	.38	.50	.63	.75	.88	1.01	1.13	1.26	1.57
Activator milliliters	8.4	11.2	13.9	16.7	19.5	22.3	25.1	27.9	34.9
Stabilizer milliliters	11.2	14.9	18.6	22.3	26.0	29.7	33.5	37.2	46.5

4. If more replenishment is required turn the screw on the pump *clockwise*, if less replenishment is required turn the screw *counterclockwise*. The screw for the stabilizer replenishment is located towards the front of the pump, the screw for the activator is located towards the back of the pump. The adjustment screw has a ten-turn range.

5. If the average plate size changes, the replenishment rate should be adjusted.

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Changing Processor for 50/60 HZ Operation

Note: The processor should be properly configured at the factory. This procedure is included for reference only.

Refer to figures I-3 and I-4. The AC motor that runs the Processor will run 5/6 of the speed at 50 Hz than at 60 Hz. The Processor speed can be adjusted by changing the drive and driven gears in the processor. The motors in the imaging section are microprocessor controlled and are not affected by the AC line frequency.

1. Unplug the power cord.

2. Remove the wire tray located on the right side of the Platesetter. Remove the right panel. Remove the front cover.

3. Remove the drive motor by unscrewing the three screws holding the drive motor to the chassis. Disconnect the two drive motor leads and unfasten the motor ground wire. Take the drive belt off of the drive shaft by rotating the shaft and deflecting the belt off of the pulley. Take care not to damage the wiring. Remove the drive gear from the drive motor by loosening the two hex set screws in the gear.

4. Remove the driven gear from the drive shaft worm gear by loosening the two hex set screws in the gear. Slide the gear off of the drive shaft worm gear while pushing the shaft to the left. This allows the gear to clear the opening in the sheet metal.

5. For 60 Hz installation the smaller gear (18 Teeth) goes on the drive motor and the larger gear (20 Teeth) goes on the drive shaft worm gear. For 50 Hz installation the larger gear (20 Teeth) goes on the drive motor and the smaller gear (18 Teeth) goes on the drive shaft worm gear.
6. When installing the gear on the drive shaft worm gear, move the shaft all the way to the right. Center the gear in the sheet-metal slot. Tighten the two set screws. Make sure that one of the screws is on the flat of the shaft.
7. When installing the gear on the drive motor, push the gear onto the shaft leaving 0.04" (1 mm) between the gear and the motor housing. Tighten the two set screws. Make sure that one of the screws is on the flat of the shaft. Seat the belt onto the driven gear and motor gear while twisting the motor into position. Reinstall the two drive motor leads, motor ground wire, and 3 drive motor screws.
8. Reconnect the power cord.
9. Turn on the Platesetter. From the operator panel, start the processor (press 4,1,8). Observe that the belt and gears are rotating properly. From the operator panel reset processor (press 7). Switch off the Platesetter power.
10. Replace the panels and wire tray.

Main Menu

Calibrate the processor from operator panel

This calibration checks to see how long it takes the leading edge of a plate to get to the exit switch of the processor. This allows the Platesetter to properly detect a jam condition.

1. Load the plate material.
2. From the operator panel, calibrate the processor (press 4,2,1,1, enter). A plate will run through the processor.
3. From the operator panel, press [‘esc’, ‘esc’, ‘esc’] to return to the main menu.

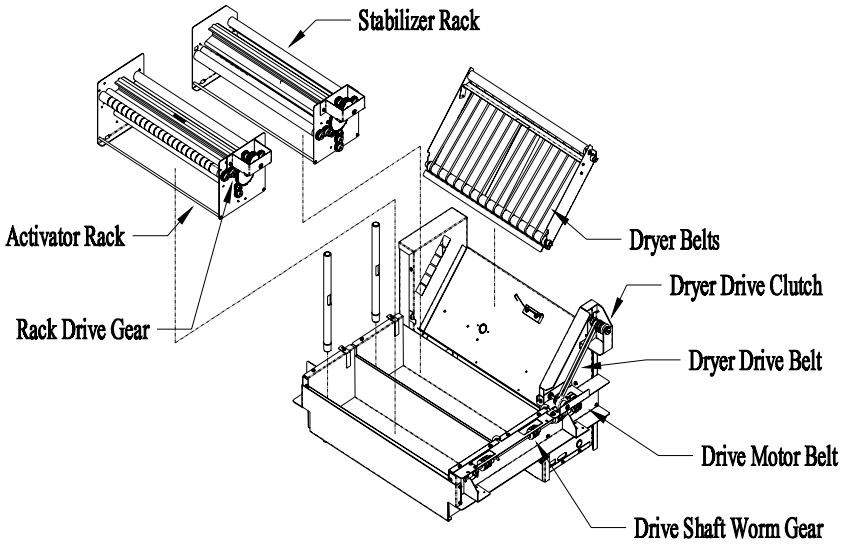

Figure I-3. Inside view of the Processor module

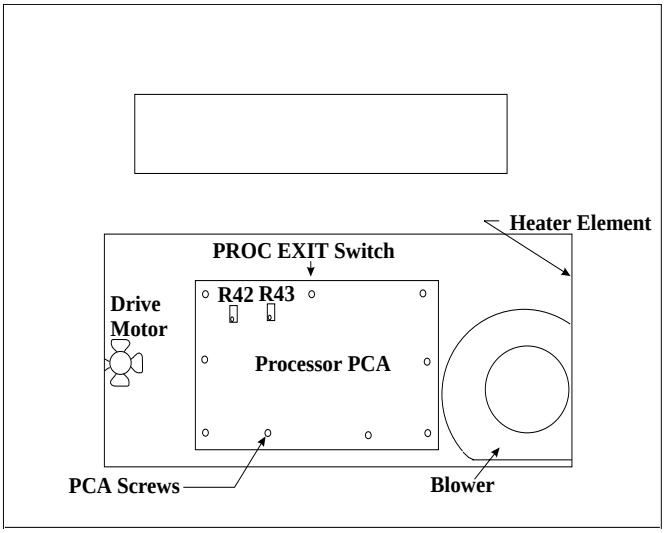

Figure I-4 Right side view of the PlateStream 46 Platesetter

Main Menu

Physical Calibration

Overview

Follow the procedures detailed in this section to calibrate Platesetter for production at the customer site. Be sure to follow these procedures in the order presented. Before performing these calibration procedures, make sure the Platesetter is in its final location, and that it has been properly leveled. Once set, these calibrations should not have to be repeated unless a problem is noticed. If any of the orange torque seals on the screws are broken the Platesetter warranty is void.

Cutter Skew

Plates must be cut square in order to avoid problems with image position, straightness and registration when mounted on the press. The cutter will pivot at the front of the Imager, and can be moved toward or away from the capstan roller at the rear of the unit.

1. To determine plate cut squareness, print either a grid pattern or a solid pattern from the RIP.

2. Once the plate has been imaged and processed, measure and compare the diagonal distance of opposite corners of the cut plate (see Figure I-5).

3. If the plate is square within specification, skip the remaining steps and go on to the **Transport Skew** procedure.

4. Remove the back cover from the Platesetter. Locate the cutter bracket and note the current position of the cutter; a reference line will be inscribed on the bracket at the factory.

5. Loosen the two 9/64" Allen-cap screws.

- If angle A is <90°, tighten adjustment screw.
- If angle A is >90°, loosen adjustment screw.
- **Note**: 1 full turn of the adjustment screw moves the cutter approximately .020" .
- Tighten the two 9/64" Allen cap screws.
- After adjustment, run two plates and check the **second** plate for skew.

NOTE: You must run two plates before checking the results as the first plate will have one cut made at the previous setting.

6. Continue adjusting cutter position and inspecting test plates until the plate is cut square. Reattach the rear cover to the Imager unit.

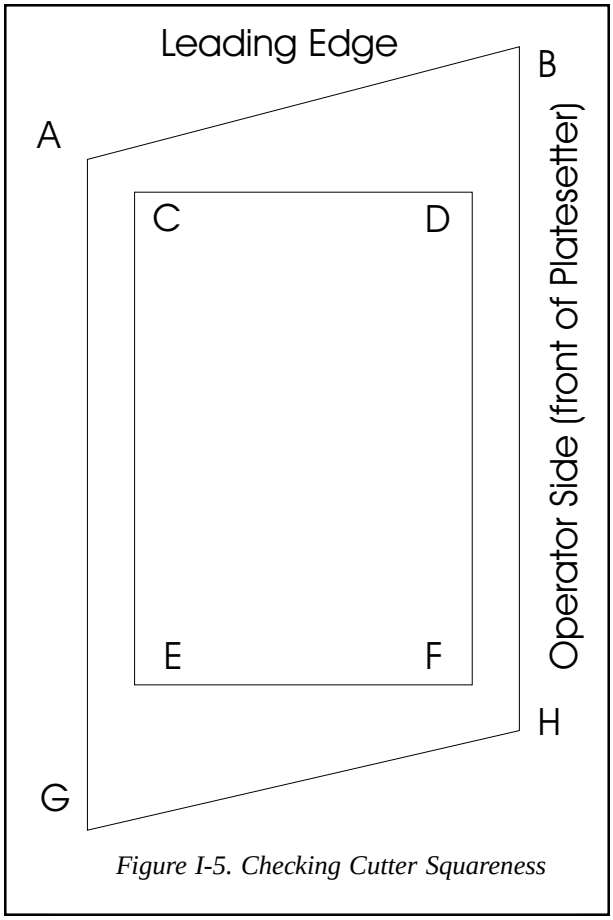

Figure I-5. Checking Cutter Squareness

Main Menu

Transport Skew

Transport skew results when the media is not feeding through the rollers perpendicular to the capstan roller. Before making any other adjustments, check the two edge guides to ensure they are securely in place. (Check the adjustable guide towards the front of the Platesetter; it should be flush with the media, but not so tight that it causes the media to buckle as it moves. If you are unsure of whether or not the media is being transported properly, open the Platesetter top cover, press the load key **'5'** on the Platesetter control panel Main Menu, and watch the media. Once you have determined that the edge guides are properly in place, follow the procedure below to optimize transport skew:

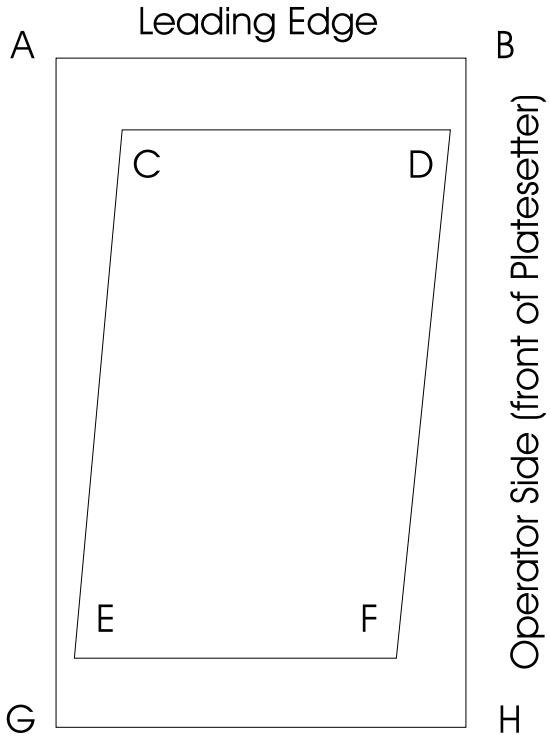

Figure I-6. Checking for Transport Skew

1. To determine whether or not the image is square on the plate, print either a grid pattern or a solid pattern from the RIP.

2. Once the plate has been imaged and processed, measure the angle E (see Figure I-6). Adjust roller pressure to eliminate transport skew as follows (see Figure I-7):

- If angle E is >90°, tighten the roller pressure on the front (operator) end of the second pinch roller.
- If angle E is <90°, tighten the roller pressure on the rear end of the second pinch roller.

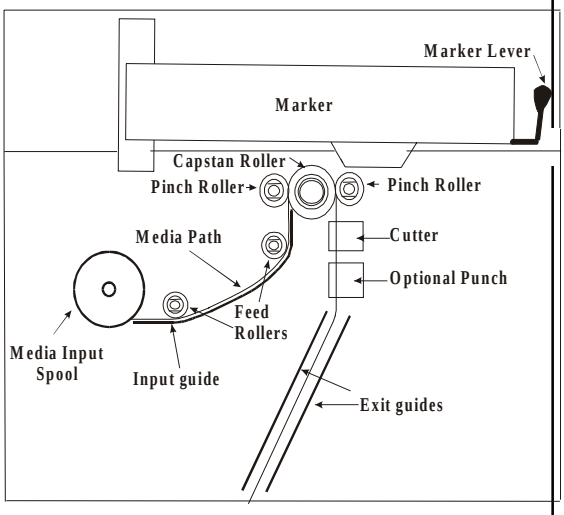

Figure I-7. Location of the Pinch Rollers

Main Menu

Image Skew

Image skew is caused by the laser marker assembly being "tilted" relative to the capstan roller. Image skew is present when the material is square, but the image on the media is measurably skewed.

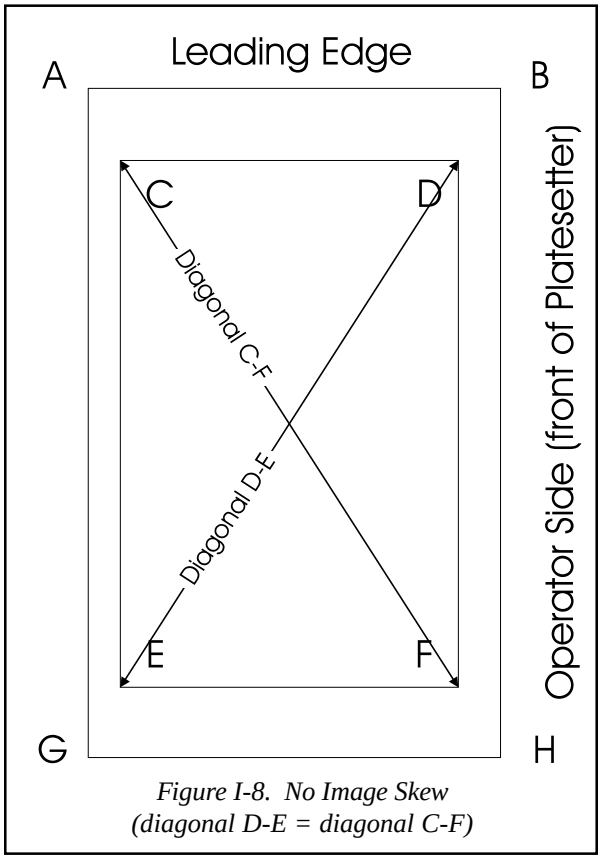

Figure I-8. No Image Skew (diagonal D-E = diagonal C-F)

1. Check for image skew by comparing the two diagonal image measurements:

- Measure the distance from point C to point F (see Figure I-8) and compare this to the distance from point D to point E.
- If the two diagonal measurements are equal, no image skew is present; skip the remainder of this procedure and go on to the next section.

2. To correct image skew, adjust the laser marker assembly position bolt. Notify Printware's Customer Service Department at 1-800-456-1400 before adjusting this bolt to avoid warranty issues. To locate this bolt:

- Stand in front of the Platesetter (operator side) facing the Platesetter.
- Open the top cover.
- Look down at the point where the laser marker assembly rests on the Imager module metal frame. Locate the laser marker assembly/Imager cover locking clamp.
- The adjustment bolt is to the right of the locking clamp.

3. Figure I-8 shows no image skew. If the image skew condition shown in Figure I-9 is present, turn the adjustment screw *clockwise* to lower the front of the laser marker assembly.

4. If the image skew condition shown in Figure I-10 is present, turn the adjustment screw *counterclockwise* to raise the front of the laser marker assembly.

5. After each adjustment, close the platesetter top cover. Run two test plates and measure the second plate for image skew. Continue until the image is square on the plate.

Main Menu

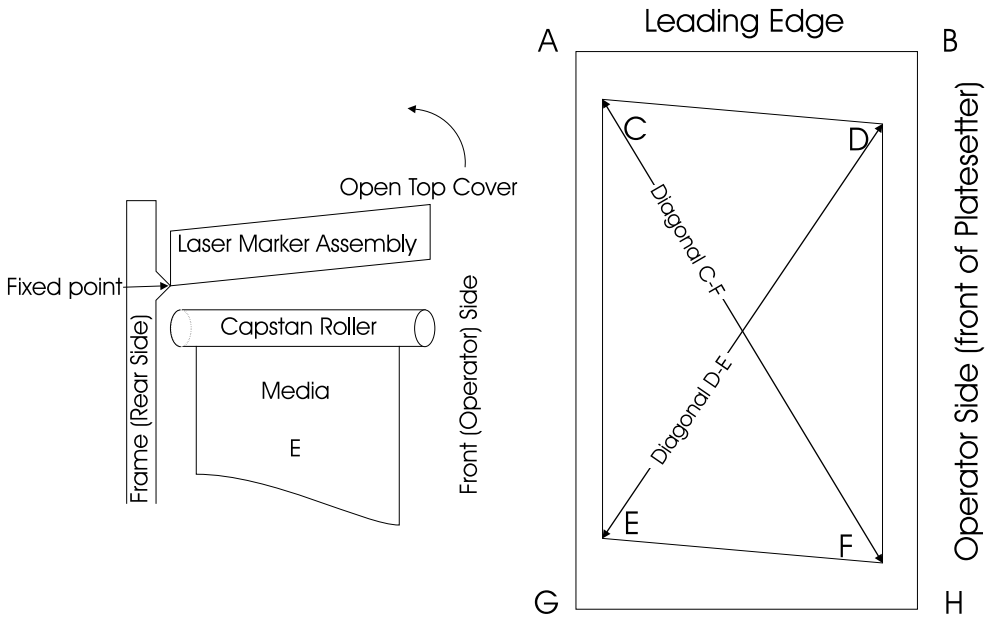

Figure I-9. Image Skew—Laser marker assembly too high in front
(diagonal D-E < diagonal C-F)
Turn adjustment screw *clockwise* to correct

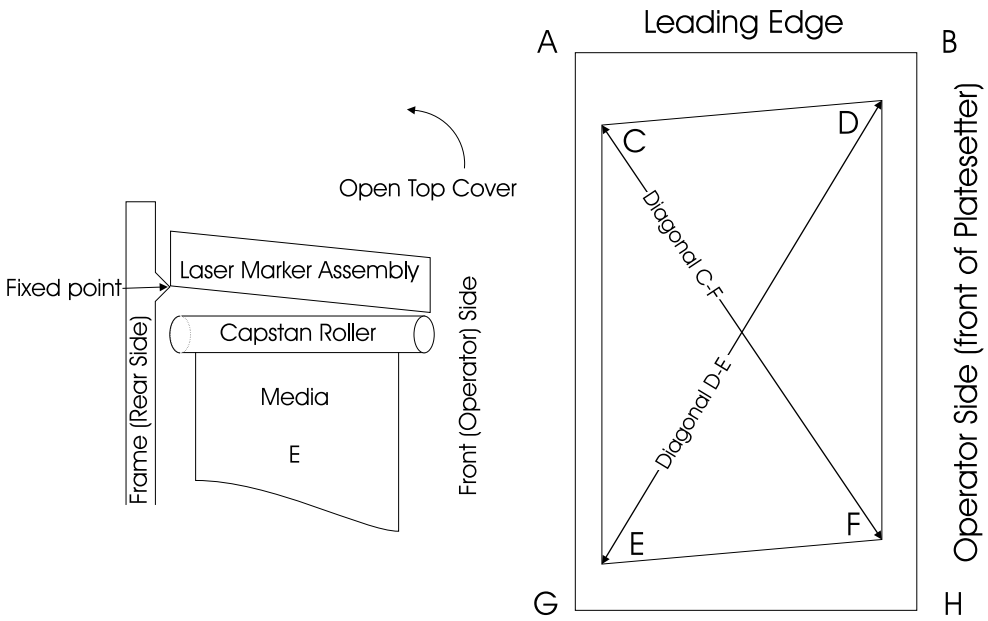

Figure I-10. Image Skew—Laser marker assembly too low in front
(diagonal D-E > diagonal C-F)
Turn adjustment screw *counterclockwise* to correct

Main Menu

Scan Width and Linearity Adjustment

This procedure enables you to fine-tune the imaging accuracy and the positioning of the laser beam. The overall width of the image on the plate is determined by the positions of two sensors accessible from the front (operator side) of the laser marker assembly. These sensors are called the Start-of-Trace (SOT) and Start-of-Scan (SOS) sensors. The SOT sensor controls the total width of the laser scan, which is wider than the maximum media width. SOS provides the timing reference which starts the active portion of the laser scan across the media. Adjusting these two sensors controls the scan width and linearity of the laser marker assembly.The sensors are accessed through a small hole in the front of the laser marker assembly. Use a 3/32" Allen key for adjustments.

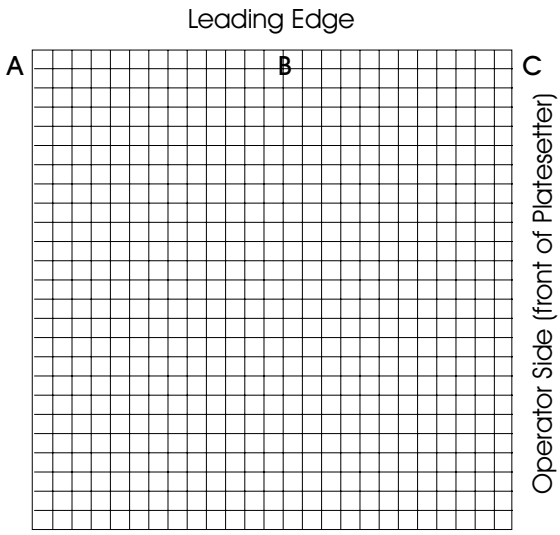

Figure 1-11. Adjusting Scan Width and Linearity

To adjust the SOT sensor (scan width):

1. From the RIP, output the Grid12.ps file.
2. Measure the distance between points A and C (see Figure I-11).

- If the distance between A and C is >12.000" (30.48 cm), turn the sensor position screw *counterclockwise*.
- If the distance between A and C is <12.000" (30.48 cm), turn the SOT screw *clockwise*. One full turn is approximately 0.030" (0.08 cm).

To adjust the SOS sensor (linearity):

Measure the distance between points A and B (see Figure I-11).

- If the distance between A and B is >6" (15.24 cm), turn the sensor position screw *counterclockwise*.
- If the distance between A and B is <6" (15.24 cm), turn the SOS screw *clockwise*. One full turn is approximately 0.015" (0.04 cm).

Marker Position Adjustment

Physical movement of the marker is not recommended. There is, however, an operator panel adjustment to compensate for slight differences in marker location. From the Main Menu on the control panel:

- Press **'4'** (More Information).
- Press **'2'** (Calibrate).
- Press **'4'** (Marker Position: xx.xx").

The image can be moved up to ±0.05" (±0.13 cm). A positive value moves the image towards the non-operator side; a negative value moves it towards the operator side.

Main Menu

Adjusting Image Length

This procedure enables you to fine-tune the image length setting of the Platesetter to compensate for small mechanical variations in components such as the rollers, or drive motors. This adjustment is made on the **Calibrate Transport Menu** on the control panel.

NOTE: Before adjusting image length, clean all transport rollers inside the Platesetter.

1. From the **RIP\JOBS** directory on the RIP, output the Grid12.ps file.

2. Measure the distance between points A and B (see Figure I-12). Use a precision steel ruler or digital measuring device to check this distance (a digital measuring device is more precise).

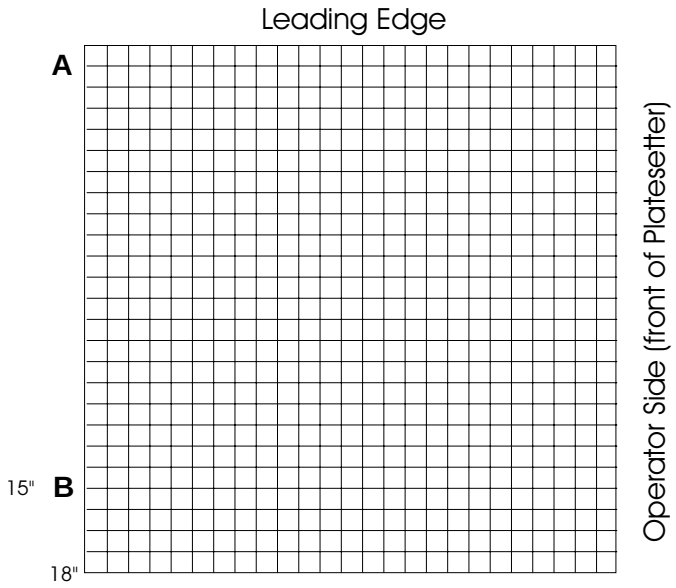

Figure I-12. Adjusting Image Length

3. If the distance between points A and B is >15.000" (38.10 cm), increase the **Manual Length Adj** value; if the distance between A and B is <15.000" (38.10 cm), decrease **Manual Length Adj**. To adjust this value:

- From the Main Menu on the control panel, press the **4** key (More Information).
- Press **'2'** (Calibrate).
- Press **'1'** (Calibrate Transport...).
- Press **'2'** (Manual Length Adj:). Enter the amount to decrease or increase. For example, if the distance is 15.010, enter .010. If the distance is 14.990 enter -.010. The length change displayed is reset to '0' after pressing enter.
- Print the Grid.ps file again, and measure the distance between points A and B.

4. Repeat steps 1 through 3 until length is within specification.

5. At 2400 dpi the manual length is adjustable in 0.002" (0.005 cm) increments.

NOTES:

- It is best to make small, incremental changes. Once you enter a new value for **Manual Length Adj**, it is immediately copied to the battery backup. Be careful not to make big adjustments as this could result in corrupt data in the firmware.
- The specification for image length accuracy is ±0.003" (75 microns).

Main Menu

Overlap Adjustment

In waste reduction mode, the Platesetter scans the leading and trailing edges of the plate, causing a black area to appear. This black area is the unimageable area of the plate.

At the leading edge of each plate is a double-exposed area, visible as a black band, where the media was exposed on the trailing edge of the previous plate, backed up and re-exposed on the leading edge of the current plate. If a silver line appears in this lead area, then the *overlap adjust* is set too low.

1. From the **RIP\JOBS** directory on the RIP, output the Grid 12.ps file.

2. To make the adjustments described below, from the Main Menu on the control panel:

- Press **'4'** (More Information).
- Press **'2'** (Calibrate).
- Press **'1'** (Calibrate Transport...).

Adjusting Cut Length

1. Measure the distance between points C and D (see Figure I-13).

2. If the distance between C and D is >0.5" (1.27 cm),decrease the value for **Cut Length Adj** on the control panel by the difference (for example, if the measured value is 0.505", and Cut Length Adj is set at 1.955", then decrease Cut Length Adj to 1.950").

3. If the distance between C and D is <0.5" (1.27 cm), increase **Cut Length Adj** by the difference.

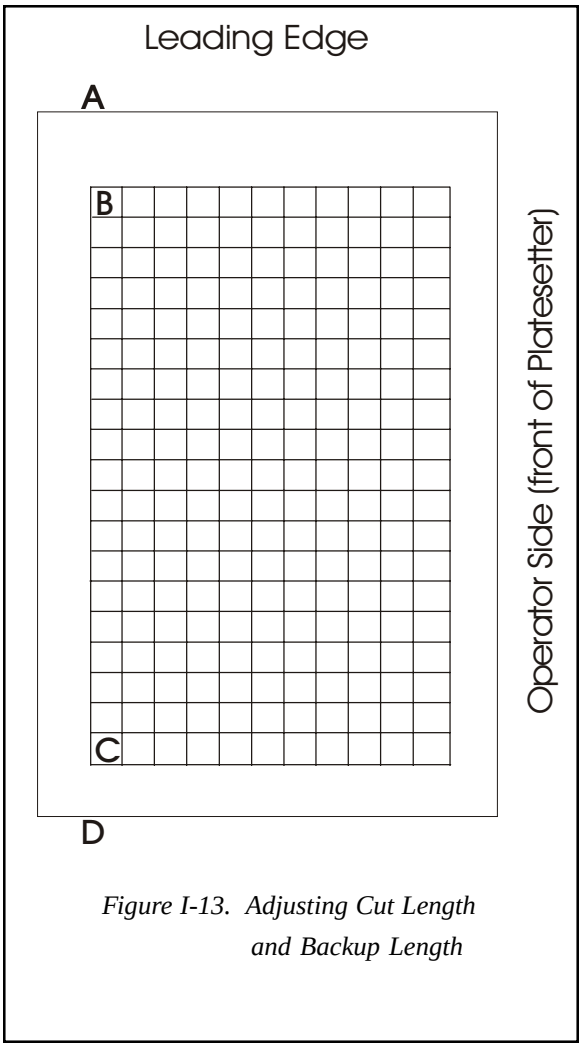

Figure I-13. Adjusting Cut Length and Backup Length

Main Menu

Adjusting Backup Length

1. Measure the distance between points A and B (see Figure I-13).

2. If the distance between A and B is >1.200" (3.05 cm), increase the value for **Backup Length Adj** on the control panel by the difference (for example, if the distance between A and B is 1.250", and Backup Length Adj is set at 1.350", increase Backup Length Adj to 1.400").

3. If the distance between A and B is <1.200" (3.05 cm), decrease **Backup Length Adj** by the difference.

4. Recheck overlap by measuring the width of the black band at the leading edge of the plate.

5. The width should be *at least* 0.050" (0.13 cm).

6. If a silver line appears, increase the value for **Overlap Length Adj** on the control panel.

Adjusting Fogging Edge LED (optional)

The Edge Fogging LED option is used only if it is required to image 13.4” (34 cm) wide media. It fogs approximately 0.2" on the operator side of the plate, allowing a fully-fogged 13.4" plate. The intensity of the Edge Fogging LED determines the width of the fogging. The Edge Fogging LED is located on the operator-side guide; the Edge Fogging LED intensity adjustment is located on the operator side of the chassis. The procedure to adjust the intensity is as follows:

1. To enable Edge Fogging, from the Main Menu on the control panel:
 • Press **‘4’** (More Information).
 • Press **‘8’** (Edge LED).
 • Press **‘ON/+’** to turn the Edge Fogging LED ON.

2. Run a 13.4"-wide plate and check the operator-side plate edge to see if it is fully-fogged (black).

3. If the fogging band width is too wide or too narrow, locate the Edge Fogging LED intensity adjustment (see Fig. I-14).

4. To increase the fogging band width, increase the LED intensity by turning the adjustment clockwise. To decrease the fogging band, turn the adjustment counterclockwise.

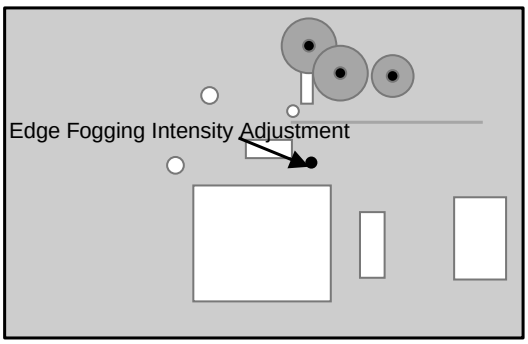

Figure I-14. Edge Fogging LED intensity adjustment (operator side of chassis)

Adjusting Miniplate (optional) Backup Length

Miniplate Backup Length can be used to adjust or eliminate the gap between Miniplate jobs.

1. To turn Miniplate Mode ON, from the Main Menu on the control panel:
   - Press **'1'** (Setup).
   - Press **'6'** (Destination).
   - Select 'Processor Miniplate' as the output destination.

2. To enable Miniplate Backup, from the Main Menu on the control panel:
   - Press **'4'** (More Information).
   - Press **'6'** (Miniplate Backup).
   - Press **'ON/+'** to turn Miniplate Backup ON, enabling calibration of the gap between Miniplate jobs.
   - Press **'5'** to select Miniplate Cut Length. Set to the intended plate length (*e.g.*, 12"), then press **'ENTER'** to save.

3. To run a test plate, from control panel Main Menu:
   - Press **'2'** (Test Plate).
   - Press **'3'** (Choose Length). Set to the approximate intended length of the Miniplate jobs (*e.g.*, 4"), then press **'ENTER'** to save.
   - Press **'2'** (Choose Pattern). Use the **'ON/'+** key or the **'OFF/'-** key to scroll through the patterns. Select the "Screen" pattern, then press **'ENTER'** to save.
   - Press **'1'** (Run XX Plates).
   - Enter the number of jobs per miniplate. Press **'ENTER'** to image a Miniplate test plate.
   - Press **'ESC'** to return to the Main Menu.

4. To calibrate the gap between Miniplate jobs, from the More Information Menu:
   - Press **'2'** to go to the Calibrate Menu.
   - Press **'1'** (Calibrate Transport).
   - Press **'7'** (Miniplate Backup Length Adj).

5. To decrease the gap between jobs, increase the value for Miniplate Backup Length Adj on the control panel.To increase the gap, decrease the value. Note that Miniplate Backup creates a non-imageable area equal to the Backup Length on the trailing edge of each job.

6. If necessary, follow the procedure for all resolutions to be used with the Miniplate mode (Miniplate Backup Length is set independently for each resolution). The default Miniplate Backup Length for 2400 DPI is .010".

Main Menu

Punch (optional) Alignment and Skew

Plates must be punched accurately to align in the press. There are two physical calibration adjustments for the punch: lateral (side-to-side) alignment, and skew (parallelism to the cut edge). Additionally, the punch depth (longitudinal position) can be adjusted in the Operator Panel (see Cut Length, Backup Length and Overlap Adjustment--Adjusting Punch Length in this guide).

NOTE: Before adjusting the punch, ensure that the cutter has been adjusted correctly (see Physical calibration -- Cutter Skew in this guide). Because the punch adjustment uses the cut edge as a reference, the cutter **must** be adjusted first.

Punch Alignment

1. To enable the punch, from the Main Menu on the control panel:
   - Press **'4'** (More Information).
   - Press **'8'** (Punch).
   - Press **'ON/+'** to turn the punch on.

2. Run a test plate with the punch on (see Cutter Skew procedure above).

NOTE: Use the intended plate width for these adjustments. Lateral alignment depends on the plate width.

3. With a 9/64" Allen wrench, loosen the two screws on the Operator side and one screw on the Non-operator side of the punch assembly (see Fig. I-15).

4. Center the punch pattern on the plate by adjusting the Lateral Adjustment Screw (both adjustment screws require a 9/64" Allen wrench). Tightening the phillips screw (clockwise) moves the punch pattern toward the operator side. Each turn moves the punch approximately 0.030" (0.08 cm).

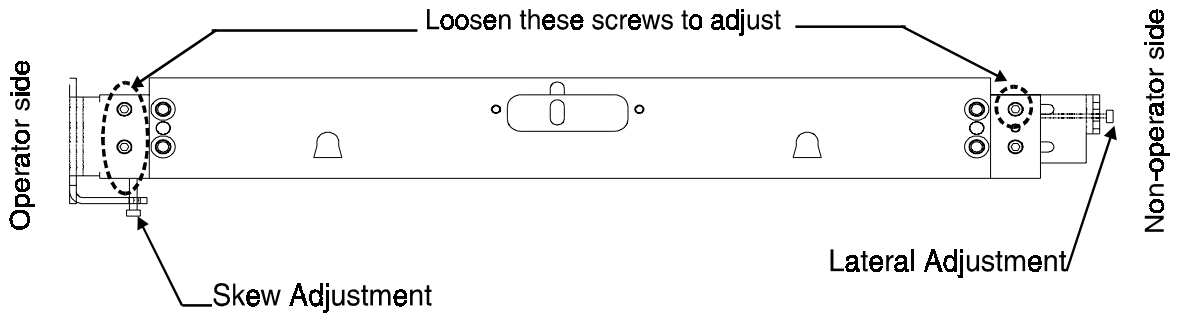

Figure I-15. Lateral and Skew Punch Adjustments

Punch Skew

1. Refer to Fig. I-16a or I-16b for plate measurements.

- If A<B, loosen the 2 locking screws on the Operator side and turn the Skew Adjustment Screw counterclockwise. Each turn moves the punch approximately 0.030" (0.08 cm).
- If A>B, turn the Skew Adjustment Screw clockwise.

2. After adjustment, run another plate to check for punch skew.

3. Continue adjusting punch skew until the punch pattern is sufficiently parallel to the image.

4. Tighten the two locking screws on either side of the punch assembly.

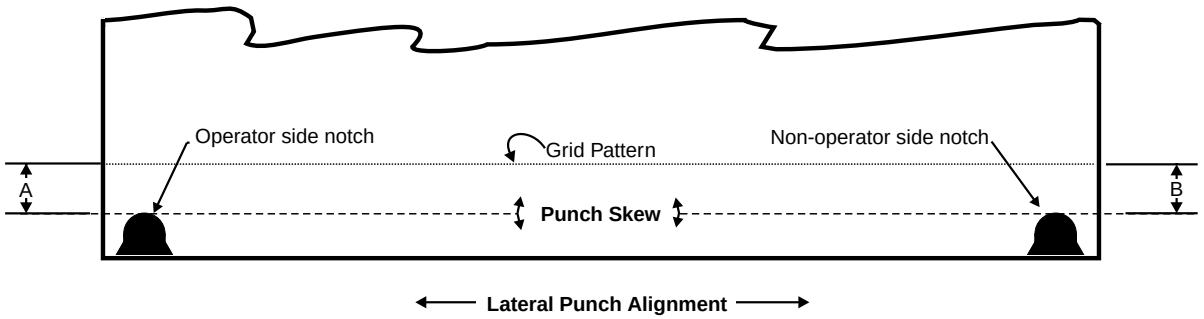

Figure I-16a. Punch Alignment and Skew

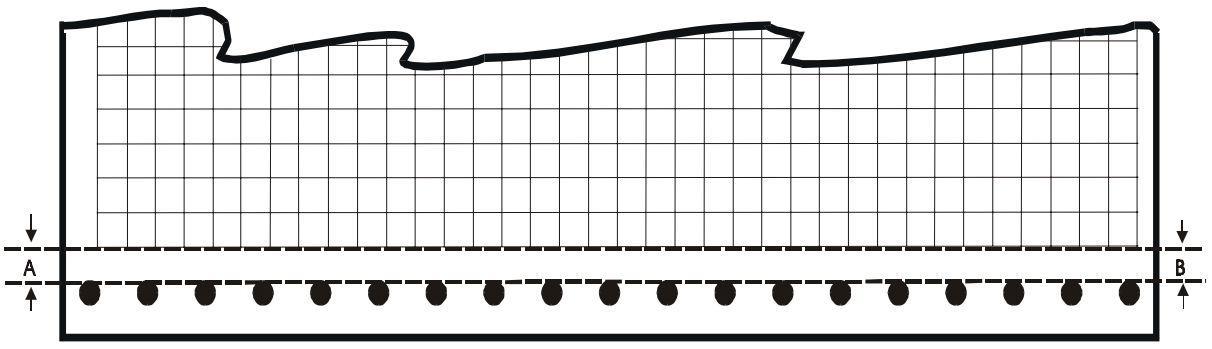

Figure I-16b. Punch Alignment and Skew

Main Menu

Adjusting Punch Length (with punch option installed)

1. To enable the punch, from the Main Menu on the control panel:
 • Press **'4'** (More Information).
 • Press **'8'** (Punch).
 • Press **'ON/+'** to turn the punch on.

2. Run a test plate with the punch on.

3. Return to the Calibrate Transport menu:
 • Press **'4'** (More Information).
 • Press **'2'** (Calibrate).
 • Press **'1'** (CalibrateTransport).

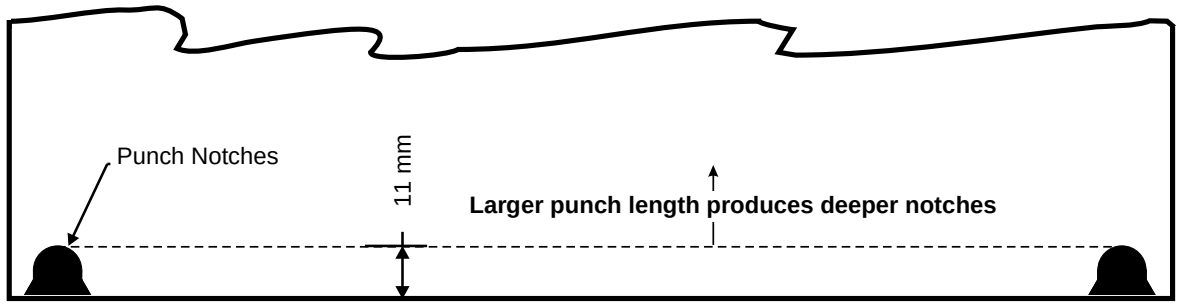

Figure I-17. Adjusting Punch Length (Bacher pattern)

4. Measure the depth or position of the punch notch (see Figure I-17 or I-18). For the Bacher punch pattern (see Figure I-17), the notch depth should be 0.433" (11.0 mm). For the pin-bar pattern (see Figure I-18), the center of the holes should be 5/16" (0.313" or 8.0 mm) from the edge.

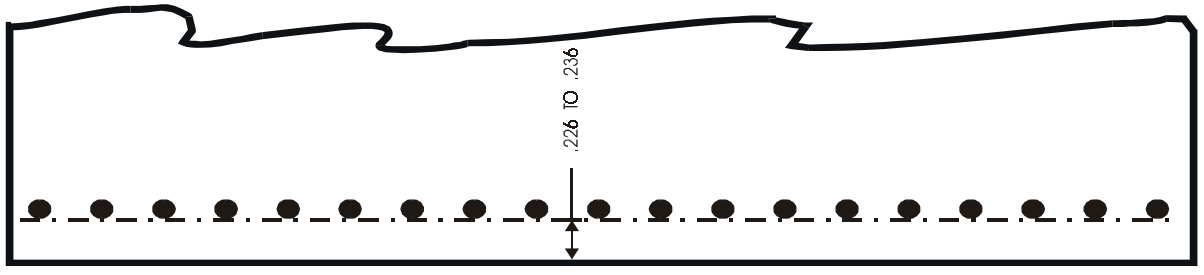

Figure I-18. Adjusting Punch Length (Pin-bar pattern)

Main Menu

5. To increase the depth, increase the value for **Punch Length Adj** and increase **Backup Length Adj** by the same amount (there is a separate set of **Backup Length** values with the punch enabled). Decreasing the values decreases depth.

6. If necessary, follow the procedure for all resolutions to be used with the punch mode (Punch and Backup Length are set independently for each resolution).

Density-Dot Calibration

See the OPERATOR'S GUIDE, Appendix B, for Density-Dot Calibration procedures.

Main Menu

De-Installing the Platesetter

These instructions are provided in the event you ever need to repackage the Platesetter.

1. Turn off the Platesetter and RIP.

2. Disconnect video interface cable from the rear of the Platesetter.

Packaging the Platesetter

A. Package the processor section:

1. Drain processor:
   Remove the front panel and drain the processor working tanks by removing the overflow tubes located inside the Platesetter to the rear of the processor tanks. Catch the effluence in the effluent tank. Be careful not to allow the tank to overflow.

2. Clean processor:
   a. Remove cover E.
   b. Remove guide D. (Press guide towards the front of the Platesetter, lift guide from the rear of the Platesetter and remove).
   c. Remove guide F (Press guide towards the rear of the Platesetter, lift guide from the front of the Platesetter and remove).
   d. Remove Activator and Stabilizer racks.
   e. Clean the processor working tanks using warm soapy water.
   f. Drain and clean the hoses.

3. Package inside of processor:
   a. Place 2 plated (metal or plastic) Styrofoam pieces in the front (operator side) of the processor working tanks.
   b. Place 2 non-plated Styrofoam pieces in the rear (non-operator side) of the working tanks.
   c. Replace the activator and stabilizer racks, and tape them down.
   d. Replace Guide D.
   e. Bubble wrap cover E, guide F and overflow tubes, and tape to the top of the working tanks.

4. Package Carts:
   a. Remove probes from plastic replenishment containers, air blow dry, and place them in the plastic clip located up underneath the processor section.
   b. Empty tanks per local environmental codes.
   c. Individually bubble wrap the tanks. Place tanks in accessory box.
   d. Remove (optional) 6' long, 1¼" diameter (180 cm by 3.2 cm) vinyl hose from underneath the processor. Place in accessory box.

Main Menu

B. Package the marker:

1. Disconnect cables:
   a. Lift the imager top cover.
   b. Disconnect the grounding strap from the imager section frame.
   c. Disconnect the 10-wire connector from J6 on the printed circuit assembly (PCA) located on top of the laser marker assembly.
   d. Disconnect the ribbon cable(s) from J8 on the PCA and J9 on the PCA.
   e. Bubble wrap the ends of the disconnected cables.

2. Prepare to remove marker:
   a. Raise marker by releasing marker lever and lifting the front of the marker.
   b. Place a 21" by 1" (53 cm by 2.5 cm) piece of tape (black electrical) on the bottom of the laser marker over the slot for the laser light.
   c. Detach the strut on the laser end while holding the marker in the upright position and removing the cap and pulling strut off the ball joint.
   d. Fasten C shaped black shipping support to the laser (right) end of the marker with eight screws.
   e. Detach the strut from the galvo (left) end of the marker.
   f. Reattach cap to struts.

3. Remove marker:
   a. Place blue plastic bag and two DESI PAK bags in the marker assembly carton, with the bag laid open.
   b. Remove the marker from the Platesetter using two people.
   c. Slide the marker assembly off the brass pivot bushing located furthest from the processor section (left) without moving the bushing.
   d. Slide the marker assembly off the brass pivot bushing located closest to the processor (right) without moving the bushing.

4. Place marker in carton:
   a. Place the marker assembly in the blue plastic bag, with the laser end placed in the location shown on the drawing that is attached to the bottom of the carton.
   b. Fold the blue plastic bag around marker and tie-wrap shut.
   c. Place flat cardboard cover with the four Styrofoam pieces facing up over the plastic bag. Seal the carton.
   d. Bubble wrap and tie wrap the struts inside the Platesetter.

Main Menu

C. Package Platesetter:

1. Remove Accessories:
   a. Remove wire tray located on the right side of the Platesetter. Bubble wrap tray and place in accessory box.
   b. Remove customer supplied power plug. Bubble wrap the end of the power cord.
   c. Remove the media spool assembly. Bubble wrap the media spools, media shaft individually. Place items in accessory box.

2. Close the Platesetter top cover. Place two DESI PAK bags on the Platesetter crate. Roll the Platesetter up the ramp onto the Platesetter crate.

3. Support Platesetter off from wheels:
   a. Place the 18" by 6 3/4" wood block, with lip underneath the bottom front of the imager. The frame must rest on the foam.
   b. Place another 18" by 6 3/4" wood block underneath the bottom back of the imager. The frame must rest on the foam.
   c. Place the two 24" by 6 3/4" wood blocks underneath the bottom sides of the imager. The frame must rest on the foam.
   d. Attach all four wood blocks to the crate by using two wood screws in each block.
   e. Replace the front & side panels and close the top cover.

4. Plastic-wrap the entire Platesetter. Place the foam cap over the Platesetter. Place the cardboard shipping sides around the Platesetter. Place the ramp inside the foam cap. Place the cardboard cover and sides around the Platesetter. Place ramp on top of the cardboard cover. Strap Platesetter with ramp to crate. Make sure the ramp, top cover, and sides are very secure.

Main Menu

This page should be filled out on Installation.

Serial Numbers and Factory Settings

Installation Date: _____

Location: _____
_____
_____

Serial Numbers:

Component	Serial #	Model
Imager Unit	_____	_____
Laser Marker Assy	_____	_____
RIP CPU	_____	_____
RIP Monitor	_____	_____

Setup

Cut Length	_____
Overlap Length	_____
Backup Length (Punch off)	_____
Backup Length (Punch on)	_____
Punch Length (Punch on)	_____
Miniplate Backup Length	_____
Image Power (Processor & Mini Plate)	_____
MT Speed	_____

Main Menu

PlateStream SC

Platesetter

Operator Manual

Printware

LEADERS IN COMPUTER TO PLATE

700633 Rev B

Main Menu

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The camera-ready master for this manual was generated on a Printware Laser Imaging System and an IBM-compatible PC.

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CAUTION! The electronic circuitry inside the Platesetter is very sensitive to damage from electrostatic discharge (ESD). Always follow the ESD protective procedures described in this manual when working on the Platesetter.

FEDERAL COMMUNICATIONS COMMISSION (FCC) NOTICE

Printware Platesetters generate and use radio frequency. If not installed properly, a Platesetter may cause interference to radio and television reception.

Printware, Incorporated, complies with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules. These rules are designed to provide reasonable protection against radio and television interference in a commercial installation.

The user can determine if this equipment is causing interference to radio or television reception by turning the Platesetter off and on. Listed below are measures the user can take to correct the interference:

a. Reorient the receiving antenna.

b. Relocate the Platesetter with respect to the receiver.

c. Move the Platesetter away from the receiver.

d. Plug the Platesetter into a different outlet so the Platesetter and receiver are on different circuits.

If these measures do not correct the interference problem, the user should consult the dealer or an authorized technician for additional suggestions.

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CHAPTER 1

GENERAL INFORMATION

Introduction

The Printware Platesetter is a compact, high resolution digital Platesetter for a range of small-format printing applications. Plates are exposed using a patented laser imaging system, and automatically processed. Figure 1-1 illustrates a flowchart of the platemaking process.

The Platesetter is controlled by a Raster Image Processor (RIP); several different RIP options are available, depending on the most common type of work to be done. The system is driven by the host computer on which the operator composes the text and graphics to be imaged. Once the print job has been composed on the host computer, it is sent to the RIP, where it is prepared for imaging. The rasterized file is then sent to the Platesetter where the file is imaged onto a plate. Figure 1-2 illustrates the basic system set-up.

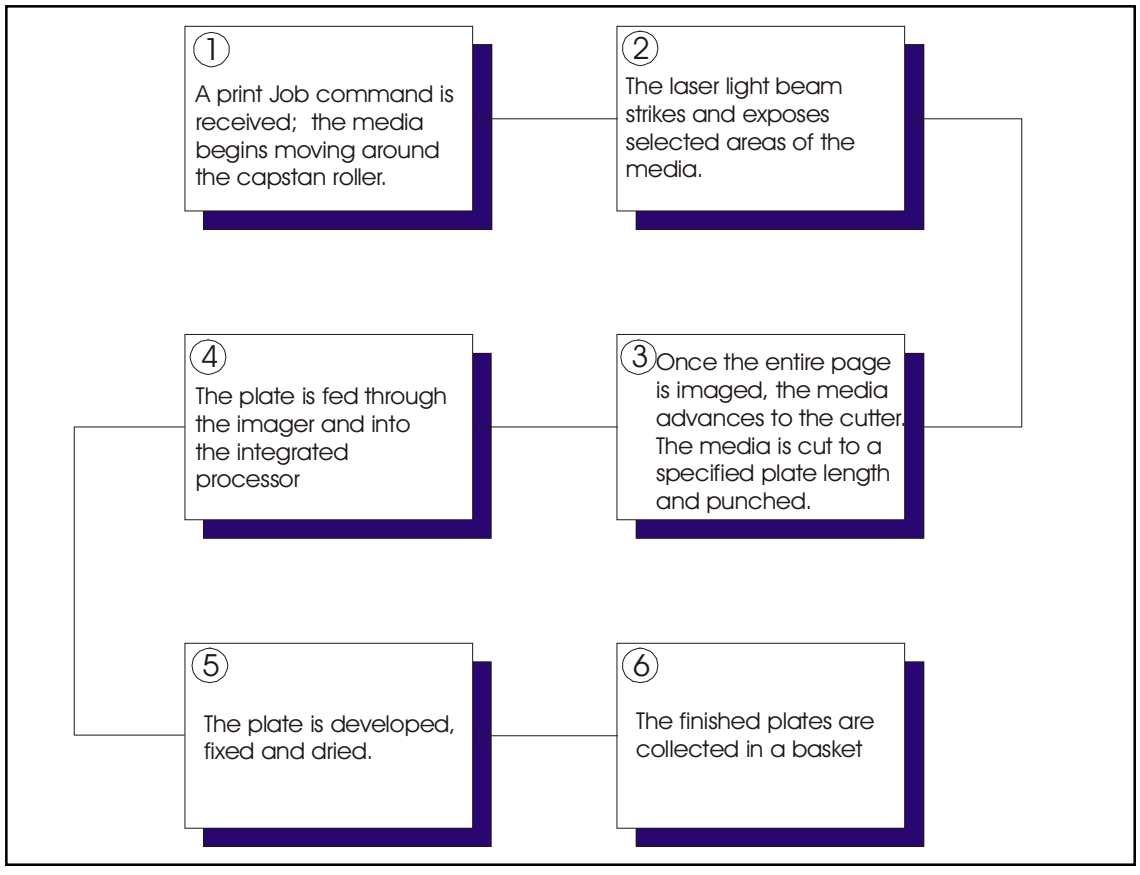
1
A print Job command is received; the media begins moving around the capstan roller.
2
The laser light beam strikes and exposes selected areas of the media.
3
Once the entire page is imaged, the media advances to the cutter. The media is cut to a specified plate length and punched.
4
The plate is fed through the imager and into the integrated processor
5
The plate is developed, fixed and dried.
6
The finished plates are collected in a basket

Figure 1-1 Flowchart of the Platemaker Process

Main Menu

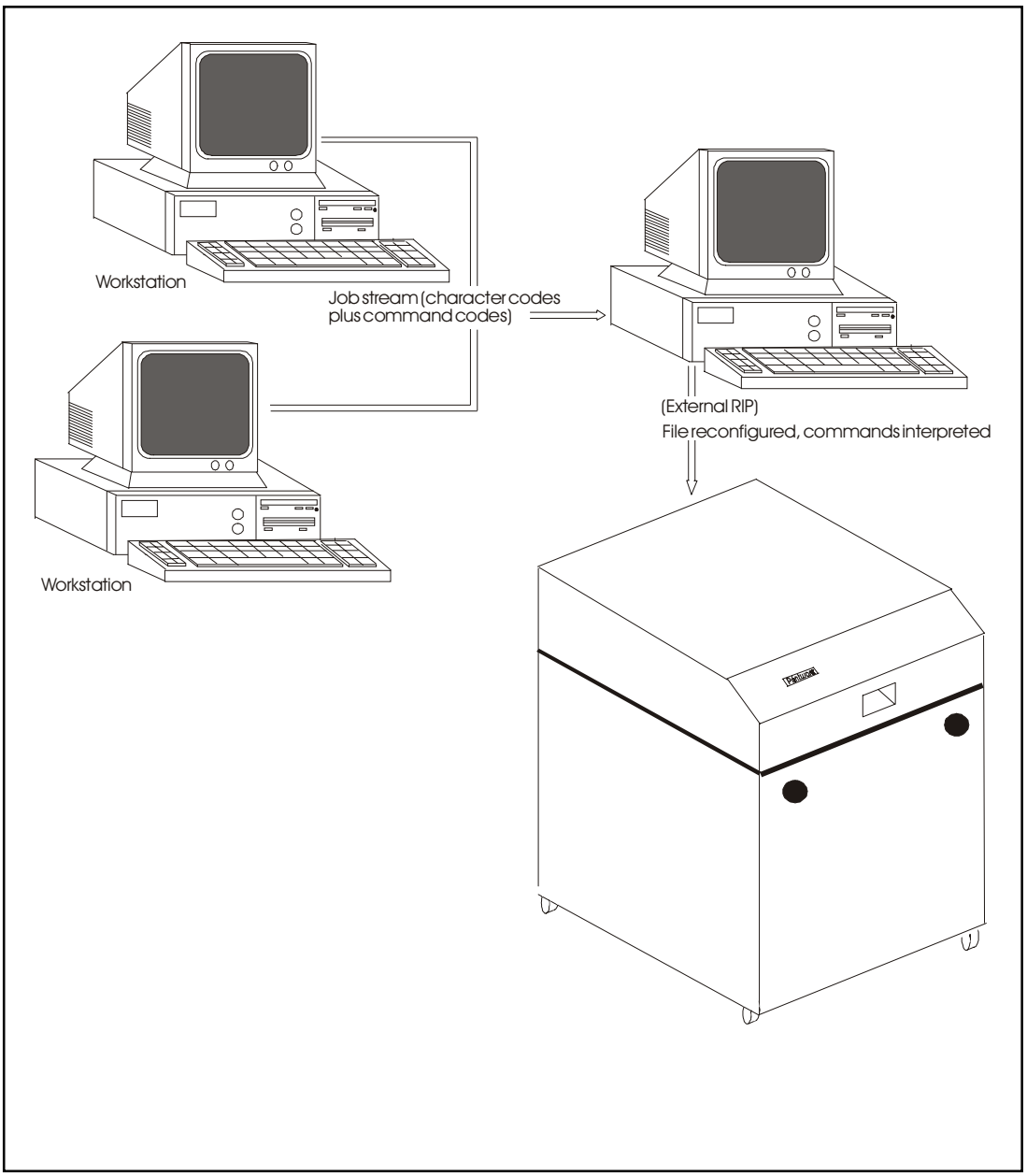

Figure 1-2 Interface Between the Host Computer, RIP, and PlateStream

Main Menu

Figure 1-3 illustrates the Platesetter media path. It uses a four-step photographic process:

1. Imaging — The laser light beam sweeps across the emulsion side of the plate material as it passes the laser marker unit. The data generated by the RIP turns the laser on and off. When the laser is turned on, the portion of the plate exposed to the laser sweep is imaged (black); the portions of the media not exposed to the laser remain clear/silver.

During imaging, the Start Of Scan (SOS) sensor on the marker unit counts the number of scan lines being imaged on the plate, at 2400 scan lines per inch. Once the correct number of scan lines have been imaged, the marker unit keeps the laser turned on to expose the trailing edge of the plate.

Once the entire page is imaged the media advances to the cutter. The cutter cuts the media to a specified plate length. After the media is cut, (and punched if the optional punch is installed) it is fed into the integrated processor.

2. Activating (Developing) — a base chemical process which etches the image on the media. This is done by the 'activator' on silver-halide plate material.

3. Stabilizing (Fixing) — a slightly acidic chemical process which stops the developing. This is done by the 'stabilizer' on silver-halide plate material.

4. Drying — air drying of the processed media. Unless another file is sent immediately, the Platesetter returns to idle mode. The capstan motors is shut off. The processor transport motor and dryer are also shut off.

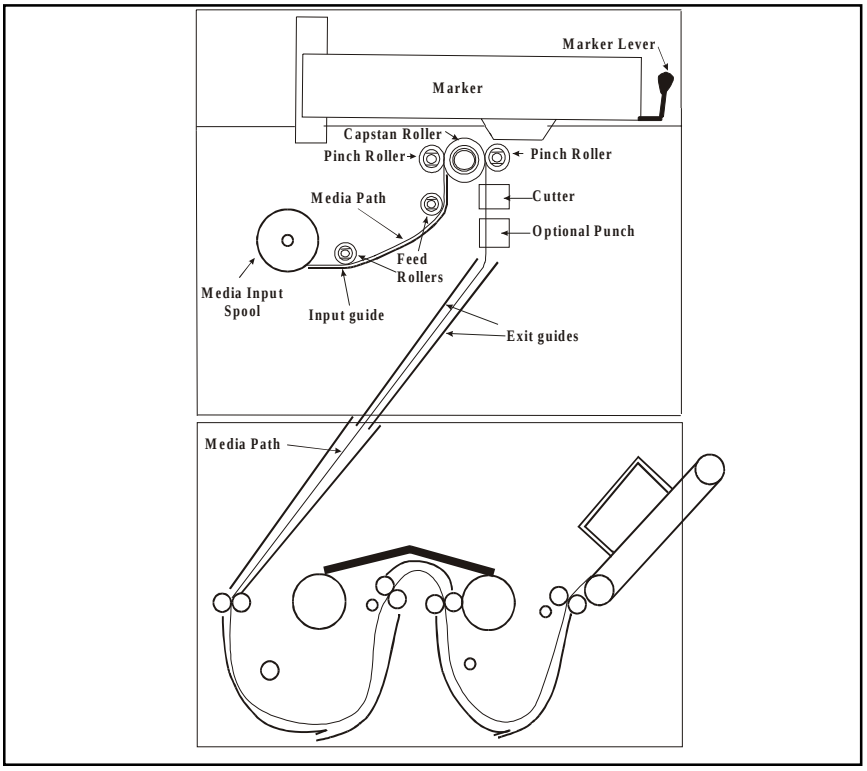

Figure 1-3 Media Path of the PlateStream Platesetter

Main Menu

Features Overview

I/O Panel

The I/O panel is located on the top rear of the Platesetter. This I/O panel is used to connect the Platesetter to an external RIP.

High Speed

The Platesetter images plates at a rate of 40 plates per hour at 2400 DPI. Plates emerge right-reading for easy proofing and final plate checks.
The Platesetter can image any width from 9" to 13.3" and any length from 12" to 22". The maximum roll length is 280'.

Media Loading

The media loading is accessible from the top of the Platesetter providing quick, easy loading of plate material.

Control Panel

The control panel is an applet on the RIP. The control panel keys allow you to perform a number of adjustment and diagnostic functions, and the 8 x 40 character display shows status, error messages, and function menus.

Power Switch

The power switch is located in the rear of the Platesetter.

Options

MiniPlate™—With this option, the Platesetter will impose multiple jobs shorter than the minimum plate length.

Punch—With the PunchStream$^{23}_{11}$ integrated punch option, the Platesetter will automatically punch the plate.

Infrared — With this option, the Platesetter will image Infrared (780 nm) plate material.

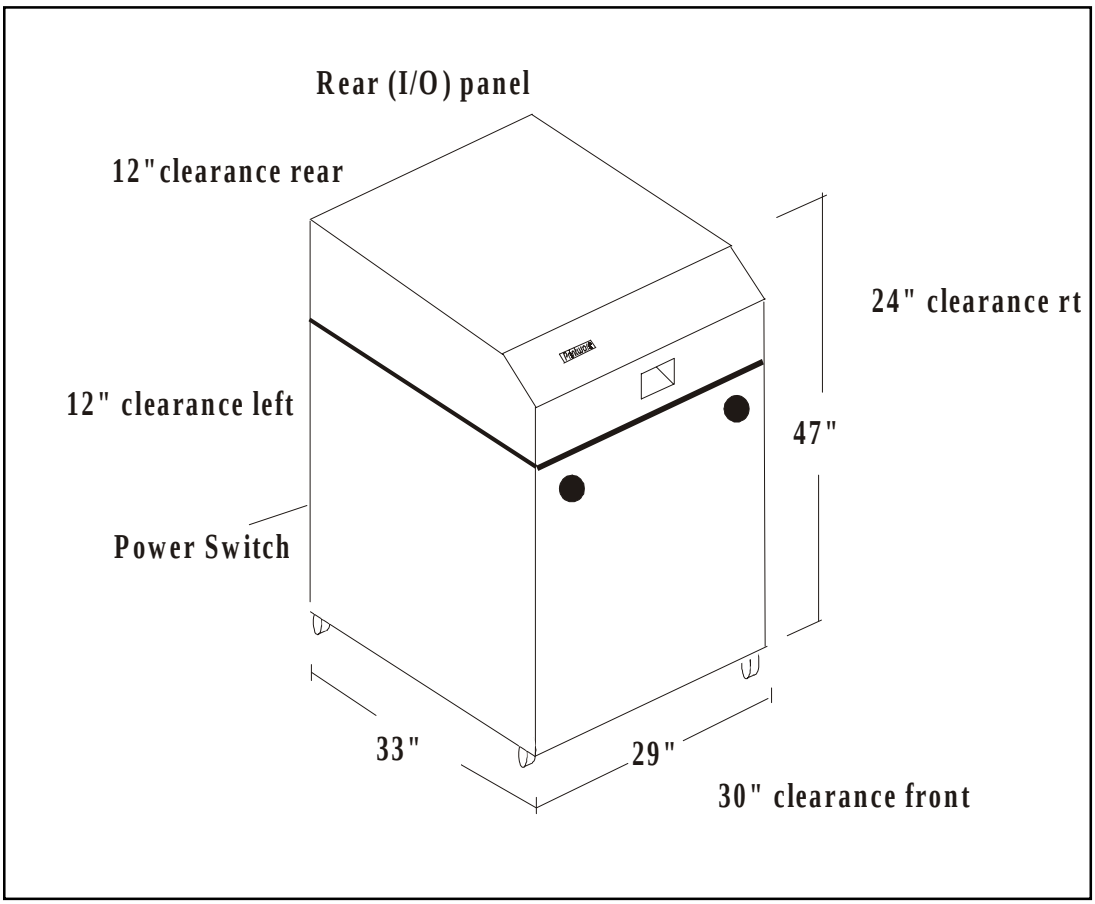

Figure 1-4 Features of PlateStream Platesetter

Main Menu

Operator Safety

The Printware Platesetter has been certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard.

This standard is in accordance with the Radiation Control for Health and Safety Act of 1968. A Class 1 certification means the Platesetter does not produce hazardous laser radiation.

The laser light produced inside the Platesetter is completely confined within protective housings and external covers. The laser beam cannot escape from the Platesetter during any phase of user operation, provided the user follows the operating instructions specified in this manual. A warning label is attached to the bottom of the laser marker unit. This label is visible whenever the media path hood is open.

The Center of Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. Compliance is mandatory for products marketed in the United States.

Always follow these basic safety rules when using the Printware Platesetter:

1. Read this manual before using the Platesetter.

2. Do not remove protective housings or external covers except as specified in this manual.

3. Do not disassemble the Platesetter or try to repair it yourself, other than as specified in the **Preventive Maintenance** and **Troubleshooting** sections of this manual. Call an authorized service technician for necessary repair.

4. Plug the power cord into a 3-conductor grounded (earthed) outlet only. Never ground the cord to a gas pipe or a water pipe. Keep the cord away from hot surfaces. Avoid using an extension cord.

5. Use caution when disconnecting any electrical connector within the Platesetter. Do not disconnect electrical components with the Platesetter turned on.

6. Be extremely careful when working on the Platesetter with the machine turned on and the top cover open. Notice the warning label attached to the underside of the laser marker unit.

7. Always read and follow all label instructions on supplies carefully. Dispose of used supplies and containers appropriately.

8. Use caution when working on or around rollers within the Platesetter with the power on. Be especially careful when wearing loose-fitting sleeves or a tie. Follow similar precautions when working on or around the cutter.

Main Menu

9. Do not operate the Platesetter if any part of it is damaged, or if any part has been dropped, until you have it checked by an authorized service technician.

10. When turning OFF the Power switch, be sure to do it after the machine cycling has come to a complete stop.

11. Use only supplies designated by Printware with your Platesetter. Consult the recommended supplies list that came with your Platesetter system. All supplies should be stored in a cool, dry area. The use of low grade or improperly stored media will result in print quality problems.

12. There is a lithium battery in the battery-backup RAM on the laser controller board (U17 on 522980-XXX), mounted to the top of the laser marker unit. This lithium battery is not replaceable. Dispose of, or recycle, all printed circuit boards properly.

WARNING! Performing procedures, adjustments, or using controls in a way other than those specified in this manual can cause hazardous laser radiation exposure, electrical hazards, or damage to the Platesetter.

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CHAPTER 2

The Control Panel

The control panel is an applet that runs on the RIP. The control panel program starts automatically when the RIP is powered up. Figure 2-1 illustrates a flowchart of the control panel menus.

The panel consists of an 8 x 40 character display which shows status messages and menu options, and the following 18 keys:

- an **ON**/+ key
- an **OFF**/- key
- an **ESC** key
- an **ENTER** key
- 4 arrow keys
- 10 numeric keys, numbered 0-9

These keys allow you to perform a variety of functions. To select an item move the cursor over the corresponding numeric key with the mouse and push the left mouse button to "press" the key. To scroll through the choices of the selected item press the ‘ON/+’ or ‘OFF/-’ keys. To change numbers in a selected item press the numeric keys or press the ‘ON/+’ to increase the number and press the ‘OFF/-’ to decrease the number. To exit a selected item without saving changes press the ‘ESC’ key. To save changes to a selected item press the ‘ENTER’ key. If a key is pressed that has no effect, the control panel will emit a beep.

The PC keyboard may also be used directly to operate the Control Panel. To minimize the Control Panel, click on the lower right corner of the Control Panel. This will leave the display, but hide the keypad. **DO NOT** close the Control Panel program (upper right corner box) while the imager is operating - this will cause the interface to crash and the imager to malfunction.

Main Menu

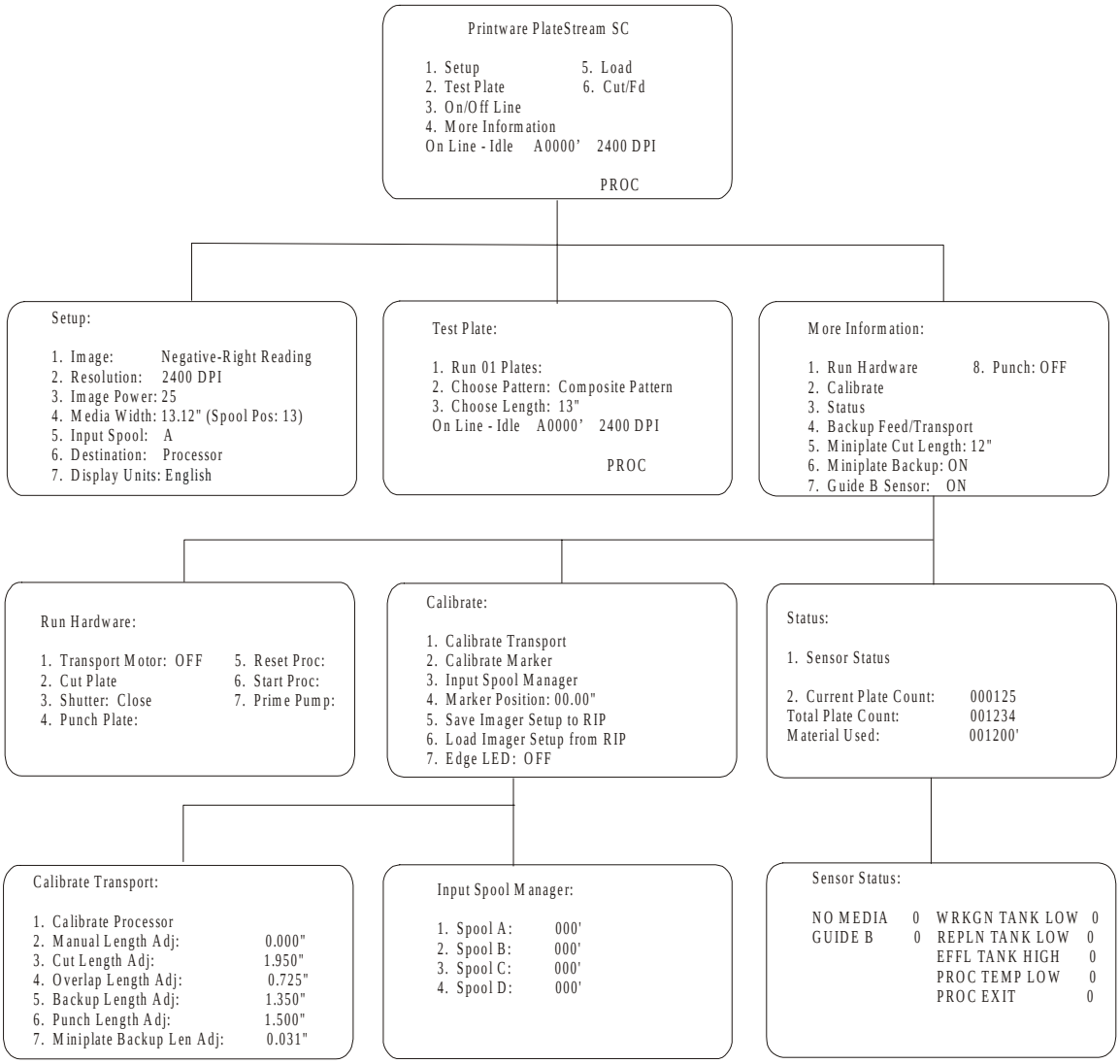


Figure 2-1 Control Panel Functional Flowchart

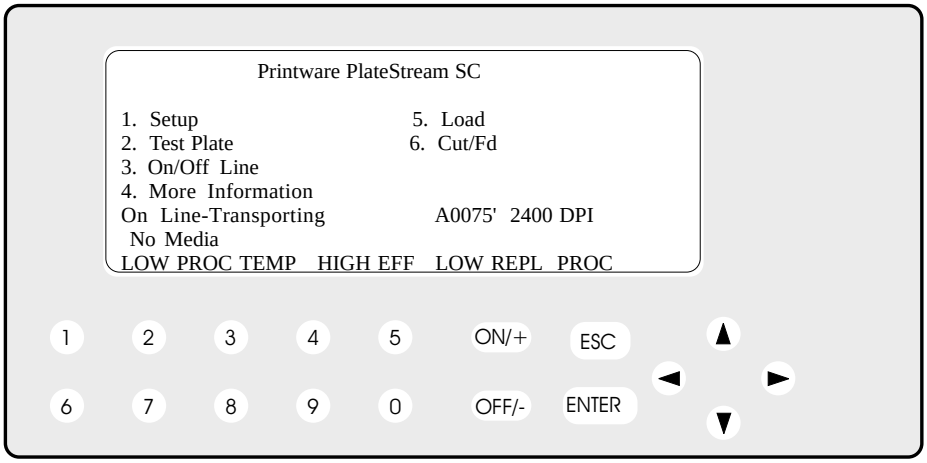
Main Menu

The Power-Up Sequence

When the Platesetter power switch is turned on, the Platesetter performs a sequence of tests of its internal components. While the Platesetter is performing these tests, the control panel display will show a series of status messages indicating the progress of the self-tests. If an error message is displayed, correct the error according to the instructions in the **Responding to Control Panel Error Messages** section in Chapter 4. If the display stops at any initialization point for more than two minutes, turn off the Platesetter and call for authorized service.

When the power sequence is successfully completed, the display will show the Main Menu screen.

Main Menu



1. Setup – Provides access to the Setup menu.

2. Test Plate – Provides access to the Test Plate menu.

3. On/Off LINE– Sets the Platesetter to either on line or off line. The Platesetter must be on line in order to accept print jobs from the RIP. The Platesetter cannot be set to On line if there is an error present. Advancing the display to any of the sub-menus automatically takes the Platesetter off line.

Main Menu

4. More Information – This selection provides access to several menus.

5. Load – This selection loads the media.

6. Cut/Fd – This selection cuts and feeds the media into the processor for the Miniplate option.

7. The bottom three lines (lines 6-8) of the Main Menu and Test Plate Menu display the current state of the Platesetter and any error conditions. Line 5 displays the marker state only if the marker is not ready to print.

Line 5: -- Scan point: 10 = Current marker state, displayed only during a marker error, or while the marker is either calibrating or initializing.

Line 6: -- On/Off Line - Idle = Current imager state, the messages displayed as a single plate is fed through the Platesetter in processor mode are:

On/Off Line – Idle	=	Imager ready to start imaging, imager and processor are idle, except, possibly, for the last several inches of the last plate exiting the processor
On/Off Line – Busy	=	Imager communicating with the RIP
On/Off Line – Backing Up	=	Backing up leader of plate from cutter to start of image point
On/Off Line – Marker Hold	=	Marker getting ready to image
On/Off Line – Imaging	=	Imaging current plate
On/Off Line – Image Leader	=	Imaging leader of next plate
On/Off Line – Advancing	=	Advancing plate to cutter
On/Off Line – Cutting	=	Cutting plate
On/Off Line – Punching	=	Punching Plate
On/Off Line - Transporting	=	Moving media out of the imager
On/Off Line - Loading	=	Loading media
On/Off Line - Feeding	=	Moving media into or through the imager

Main Menu

On/Off Line – Ready Pause = 0.5 sec pause between plates

On/Off Line – Ready/Trans = Imager ready to start imaging , plate (s) still in imager

On/Off Line – Ready/Proc = Imager ready to start imaging, plate (s) in processor only

A0075' = Approximate number of feet of media left on input spool "A" (if length of media on the spool was entered when the spool was loaded)

2400 dpi = Current resolution (dots per inch)

Line 7:

NO MEDIA = 'No media' detected at sensor closest to input spool

LOW WORKING = Either or both of the processor working tanks are low on chemistry.

INTERLOCK OPEN = The marker is in the raised position

Line 8:

LOW PROC TEMP = The processor activator bach is not up to specified temperature.

HIGH EFF = The effluent tank is full

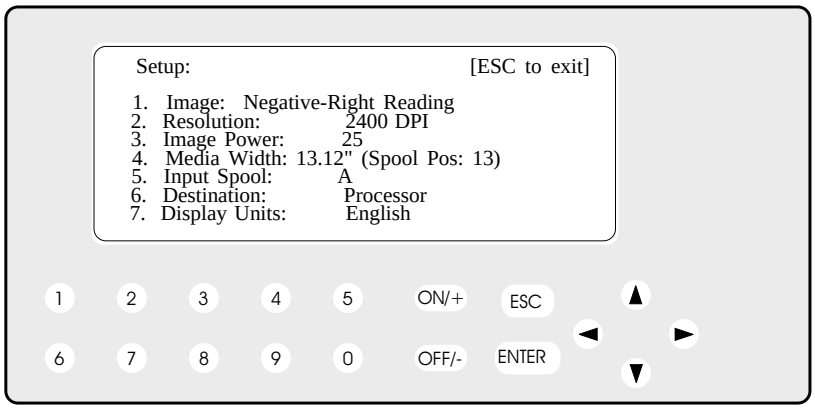
LOW REPL = Either or both of the replenisher tanks are empty

Main Menu

PROC = Imager destination (lower right corner of operator panel):

PROC	=	Imager is in processor mode
MINI	=	Imager is in miniplate mode, there are No accumulated miniplates in the imager
MINI3	=	Imager is in miniplate mode, there are 3 accumulated miniplates in the imager (if there are more than 9 accumulated miniplates, the digit changes to a '+')

Setup Menu



1. Image — This selection sets the type of imaging for the different types of media. The choices are: Positive or Negative Wrong Reading, and Positive or Negative Right Reading.

Main Menu

2. Resolution — Sets the resolution of plates imaged from the control panel. The PlateStream SC runs at 2400 dpi.

3. Image Power — Sets the image power (laser intensity). Increasing image power increases D_{max} or Density, while decreasing image power reduces D_{max}.

4. Media Width: xx.xx" (Spool Pos: yy) — Media Width is the exact width, entered by the operator, from 7.00" to 13.40" (17.78 cm to 34.00 cm). Spool Pos is automatically calculated from Media Width, and indicates the position to set the spool or cassette. Spool position is set at the media width in inches, rounded to the nearest inch, from 7 to 13. Media Width is set independently for each of the Input Spools (see #5 below), eliminating the need to reset image width every time the spool is changed.

5. Input Spool — Selects the input spool. The choices are: A, B, C, or D. The media remaining for the selected spool decreases as media is imaged (see **Spool Manager** later in this chapter). Each spool can hold up to 280' (85 m); each spool's counter can be reset after reloading. Input spool selection will be displayed in front of the feet remaining in the main menu.

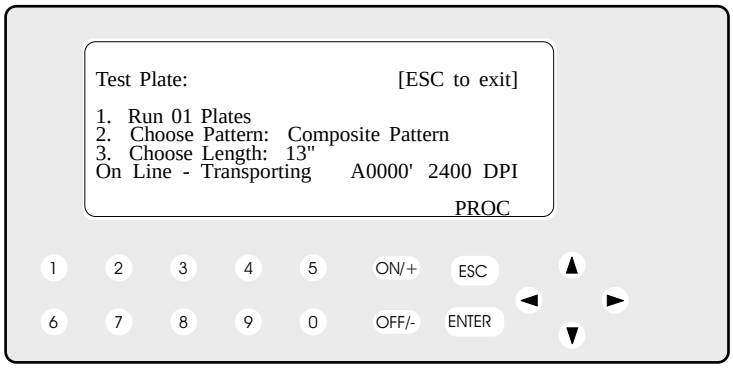
6. Destination — Sets the output destination for the imaged media. Choices are: 'Processor,' or 'Processor Miniplate' with the Miniplate option. For a standard PlateStream SC with no options installed, Processor is the only destination.

7. Display Units – Toggles between English and Metric display units.

NOTE: This manual generally refers to English display units with Metric units in parentheses where applicable.

Main Menu

Test Plate Menu


Test Plate: [ESC to exit]
1. Run 01 Plates
2. Choose Pattern: Composite Pattern
3. Choose Length: 13"
On Line - Transporting A0000' 2400 DPI
PROC
1 2 3 4 5 ON/+ ESC
6 7 8 9 0 OFF/- ENTER

1. Run *nn Plates* — Sets the number of plates from 1 to 99.
Pressing **ENTER** sets the specified number of plates to be printed. Pressing ENTER again causes the specified number of plates to be printed. As each plate is printed, the displayed number will decrement by 1. Printing can be interrupted by pressing the **ESC** key. If printing is interrupted, the current plate will be imaged, the Platesetter will not print the remaining plates, the displayed number will return to its selected value. If printing is not interrupted, then once the specified number of plates have been imaged the displayed value will return to its selected value.

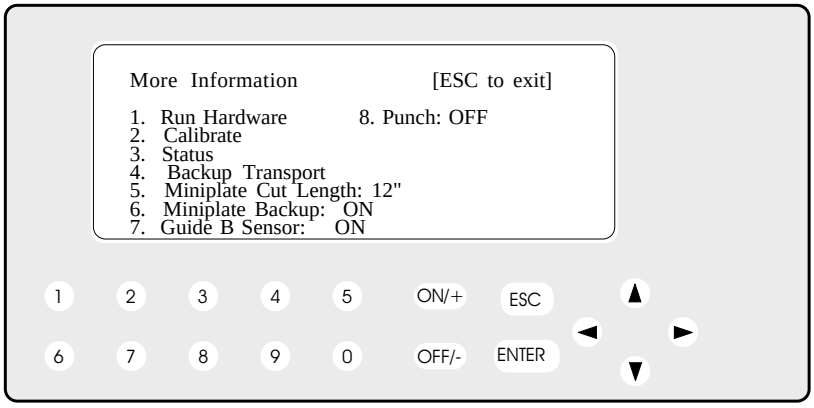
2. Choose Pattern — This selection sets the pattern. The choices are:

Composite Pttrn	Large Black Sqs
All White Plate	Large White Sqs
All Black Plate	Light Gray Tone
Half Blk/Wht	Dary Gray Tone
Thin Vert Lines	Horz Line Res
Wide Vert Lines	Press Pattern
Thin Horiz	Screen
Wide Horiz	Calib Screen
Small Black Sqs	4 Pix on Focus
Small White Sqs	

3. Choose Length — Sets the length of the test plate. The allowable range is 12" to 22" in processor mode, and 2" to 22" in Miniplate modes.

Main Menu

More Information Menu


More Information [ESC to exit]
1. Run Hardware
2. Calibrate
3. Status
4. Backup Transport
5. Miniplate Cut Length: 12"
6. Miniplate Backup: ON
7. Guide B Sensor: ON
8. Punch: OFF
1 2 3 4 5 ON/+ ESC
6 7 8 9 0 OFF/- ENTER

1. Run Hardware — Provides access to the Run Hardware menu.

2. Calibrate — Provides access to the Calibrate menu.

3. Status — Provides access to the Status menu.

4. Backup Feed/Transport — Turns the capstan motor on and backs up the media six inches. This is used to clear media wrapped around the capstan roller (see **Clearing Media Path** in chapter seven). To stop capstan motor, press '**ESC**' or '**OFF**/-' key.

5. Miniplate Cut Length:—(Only with Miniplate option installed) Cuts the plate if accumulated Miniplate length exceeds this value. Values are integer inches, e.g., 12", 13", 14", 15", 16", 17", or 18". The 18" setting cuts all plates greater than 17.5". The minimum cut length is 12". The maximum cut length is 18".

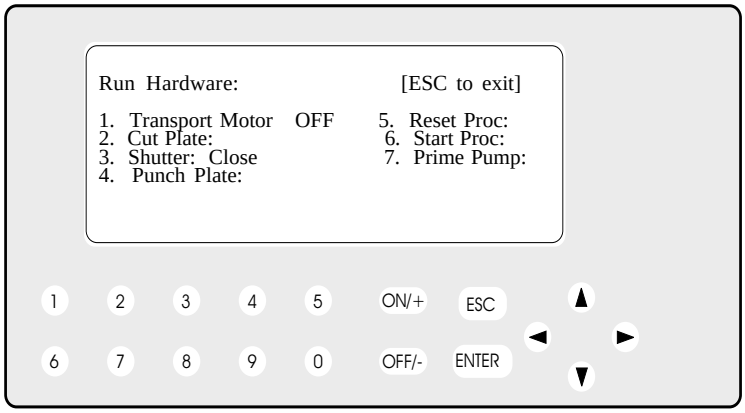
6. Miniplate Backup:—Enables calibration or elimination of the gap between jobs in Miniplate mode (see **Physical Calibration** in the INSTALLATION GUIDE).

7. Guide B: Turns the Guide B sensor On/OFF. The sensor should be ON to detect jams unless the sensor is damaged.

8. Punch:—(Only if punch option installed) turns the punch on and off.

Main Menu

Run Hardware Menu


Run Hardware: [ESC to exit]
1. Transport Motor OFF
2. Cut Plate:
3. Shutter: Close
4. Punch Plate:
5. Reset Proc:
6. Start Proc:
7. Prime Pump:
1 2 3 4 5 ON/+ ESC
6 7 8 9 0 OFF/- ENTER

1. Transport motor — Turns on or off the capstan motor.

2. Cut Plate — Cycles the cutter.

3. Shutter — Opens and closes the shutter.

4. Punch Plate — Cycles the Punch

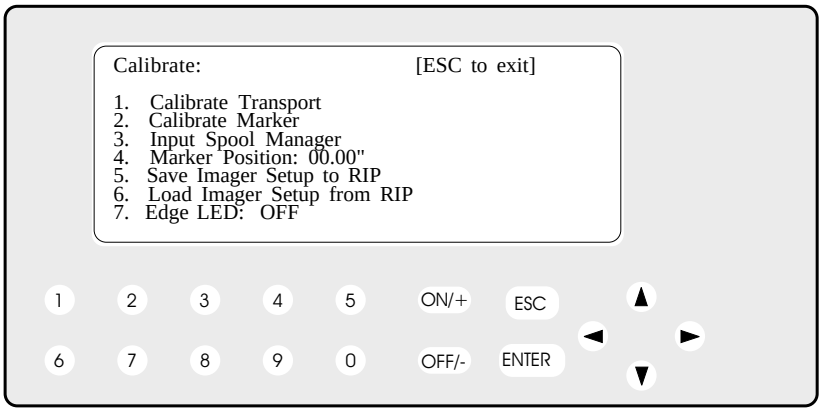
5. Reset Proc — Stops the processor and resets all of the counters.

6. Start Proc — Starts the processor to test for functionality of this section.

7. Prime pump — Turns on the processor pump for approximately five minutes.

Main Menu

Calibrate Menu


Calibrate: [ESC to exit]
1. Calibrate Transport
2. Calibrate Marker
3. Input Spool Manager
4. Marker Position: 00.00"
5. Save Imager Setup to RIP
6. Load Imager Setup from RIP
7. Edge LED: OFF
1 2 3 4 5 ON/+ ESC
6 7 8 9 0 OFF/- ENTER

1. Calibrate Transport—Provides access to the Calibrate Transport menu.

2. Calibrate Marker—Sets the marker to perform a full calibration the next time the machine is powered up.

3. Input Spool Manager—Provides access to the Spool Manager menu.

4. Marker Position—Adjusts the side-to-side image position up to ±0.05" (±0.13 cm) (Increasing the value moves the imager away from the operator side, decreasing the value moves the imager towards the operator side) to accommodate the physical position of the marker.

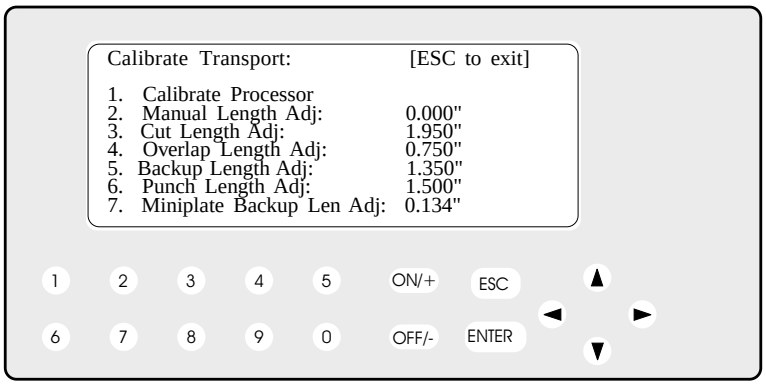
5. Save Imager Setup to RIP—Saves the imager setup data to the RIP hard drive.

6. Load Imager Setup from RIP—Reloads the imager setup data from the RIP hard drive.

7. Edge LED:—(Only if 34cm option installed) turns on the Edge Fogging LED, which exposes approximately 0.2" on the operator side of the plate. The Edge LED should normally be OFF for plate widths of 13.3" or less, and ON for plate widths more than 13.3", allowing a fully-exposed 13.4" plate.

Main Menu

Calibrate Transport Menu



1. Calibrate Processor — Runs a plate which calibrates the processor exit sensor for 2400 dpi. The processor exit sensor is calibrated at the factory. If the control panel error displays 'Media didn't exit imager' or 'Media didn't exit processor' calibrating the processor is one of the possible solutions. Ensure that destination is set to "Processor," then Calibrate the processor by pressing **'ENTER'**. The Plateseetter must be in **Processor mode** to calibrate the processor.

For more details on menu items 2 - 7, see **Physical Calibration** in the INSTALLATION GUIDE.

2. Manual Length Adj: — Incremental corrections to obtain the correct plate length. The length change displayed is reset to '0' after pressing enter. At 2400 dpi, the manual length is adjustable in 0.002" (0.005 cm) increments. The length will not be changed if the increment entered is less than the minimum increment size.

3. Cut Length Adj:—Sets the length of the trailing edge of the plate.

4. Overlap Length Adj:—Sets the length of plate that is double exposed on the leading edge.

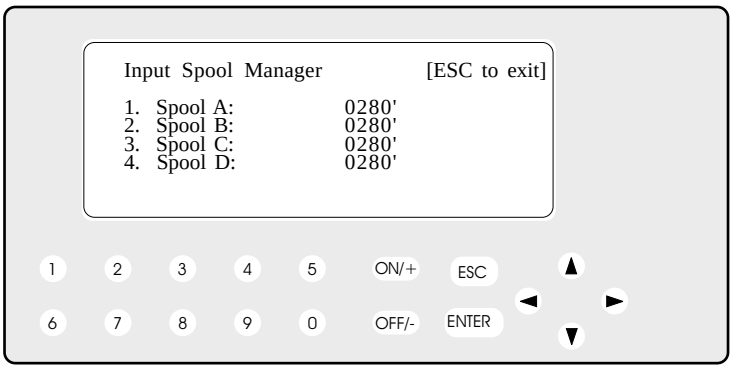
5. Backup Length Adj:—Adjusts the length of the leader (there is a second set of values with the punch option installed).

6. Punch Length Adj:—(Only with the punch option installed) Adjusts the punch position on the plate.

7. Miniplate Backup Length Adj:—(Only with the Miniplate option installed) Calibrates or eliminates the gap between jobs in Miniplate mode.

Main Menu

Input Spool Manager Menu



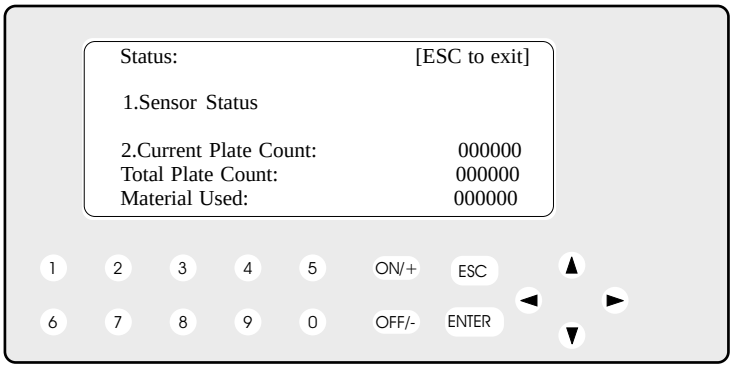
1. **Spool A:** — Sets the amount of material in spool A (up to 280' or 85 m).

2. **Spool B:** — Sets the amount of material in spool B.

3. **Spool C:** — Sets the amount of material in spool C.

4. **Spool D:** — Sets the amount of material in spool D.

Status Menu


Status: [ESC to exit]
1.Sensor Status
2.Current Plate Count: 000000
Total Plate Count: 000000
Material Used: 000000
1 2 3 4 5 ON/+ ESC
6 7 8 9 0 OFF/- ENTER

1. Sensor Status — This selection provides access to the Sensor Status menu.

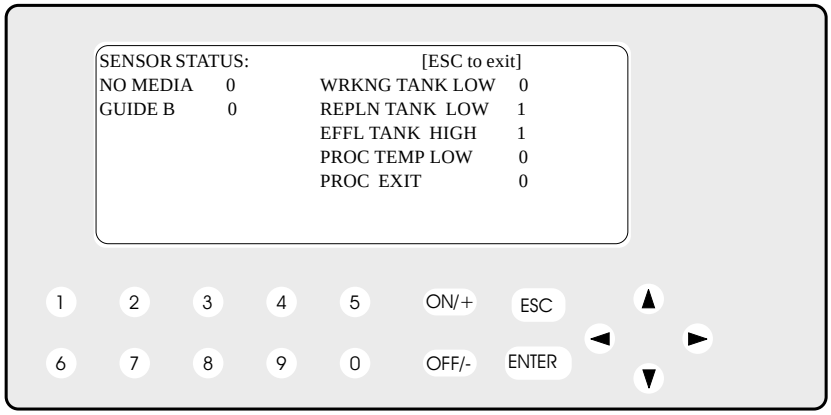
2. **Current Plate Count —** This selection clears and displays the current plate count.

   Total Plate Count — Displays the total number of plates imaged by the Platesetter.

   Material — Displays the total number of feet of material run through the Platesetter.

Main Menu

Sensor Status Menu



The Sensor Status menu indicates the current digital status of all Platesetter sensors. Explanations of all the sensor indications are shown below. This menu is provided primarily for trained technician use.

NO MEDIA — Identifies the amount of media in the spool as okay or none. A '**0**' indicates that the media supply is empty, '**1**' indicates that the amount is sufficient.

GUIDE B — Indicates the presence of media at Guide B. A '**1**' indicates that media is present (*e.g.,* during imaging). A '**0**' indicates the sensor is clear. This is the normal idle condition.

WRKNG TANK LOW — This sensor monitors the chemistry level in the working tanks in the processor. A '**0**' indicates the current level is okay; a '**1**' indicates a low solution level in one or both of the tanks.

REPLN TANK LOW — This sensor monitors the solution level in the replenishment tanks. A '**0**' indicates the current level is okay; a '**1**' indicates a low solution level in one or both of the tanks.

EFL TANK HIGH — This sensor monitors the level of spent solution in the effluent tank. A '**0**' indicates the current level is okay; a '**1**' indicates the tank needs to be emptied.

PROC TEMP OK — The processor Activator Temperature sensor monitors the temperature of the Activator bath. A '**0**' indicates that the current temperature is okay; a '**1**' indicates that the bath is still warming up, or that there is a problem with the heater.

PROC EXIT — Indicates the presence or absence of media at the processor exit sensor. A '**1**' indicates that media is present (*e.g.,* during imaging). A '**0**' indicates the sensor is clear. This is the normal operating condition.

Main Menu

PREPARING FOR OPERATION

Main Menu

CHAPTER 3

Preparing to Make Plates

Overview

The following information explains how to prepare the Platesetter for a print job. Refer to your host computer operator manual and the RIP operator manual for further detail on connecting and operating these devices with the Platesetter.

Introduction

Before making a plate, the Platesetter must be:

- Loaded with the correct type of plate media (see **Loading Plate Media** section in this chapter).
- Connected to the RIP; I/O panel is located on the top rear of the machine.
- Ready to accept a print job (Main Menu displayed on the control panel, On-Line state, no error conditions).
- The integrated processor must be filled to proper levels (see **Filling the Processor Tanks** section in this chapter).

Main Menu

Filling the Processor Tanks

Overview

Fill the processor working tanks and replenishment tanks as needed. Follow manufacturer's safety instructions. The message ‘LOW REPL’ will appear on the lower half of the control panel Main Menu when one or both of the replenishment tanks are low on chemistry. The message ‘LOW WORKING’ will appear on the lower half of the control panel Main Menu when one or both of the processor working tanks are low on chemistry. The message ‘HIGH EFF’ will appear on the lower half of the control panel Main Menu when the effluent tanks is full. Once per week, clean the processor racks. Follow the cleaning procedure as described in Chapter 6, **Preventive Maintenance**.

Procedure

1. Remove imager front panel and remove cover E from processor. (See figure 3-1).

2. If necessary, prepare the Activator and Stabilizer solutions in the plastic replenishment containers following the manufacturer's instructions.

3. Remove probes from the replenishment containers. Fill the processor working tanks inside the Platesetter and the replenishment containers with the proper chemistry. Reinstall the probes into the replenishment containers. Make sure the activator tanks are filled with activator and the stabilizer tanks are filled with stabilizer. Place cover E over processor working tanks. Replace front panel.

4. Remove the probe and hose from the effluent tank. Remove the effluent tank and empty it. Be sure to dispose of or recycle the spent chemistry in accordance with local regulations.

5. Reinstall the probe and hose into the effluent tank. Reinstall the effluent tank. Replace the front panel.

Main Menu

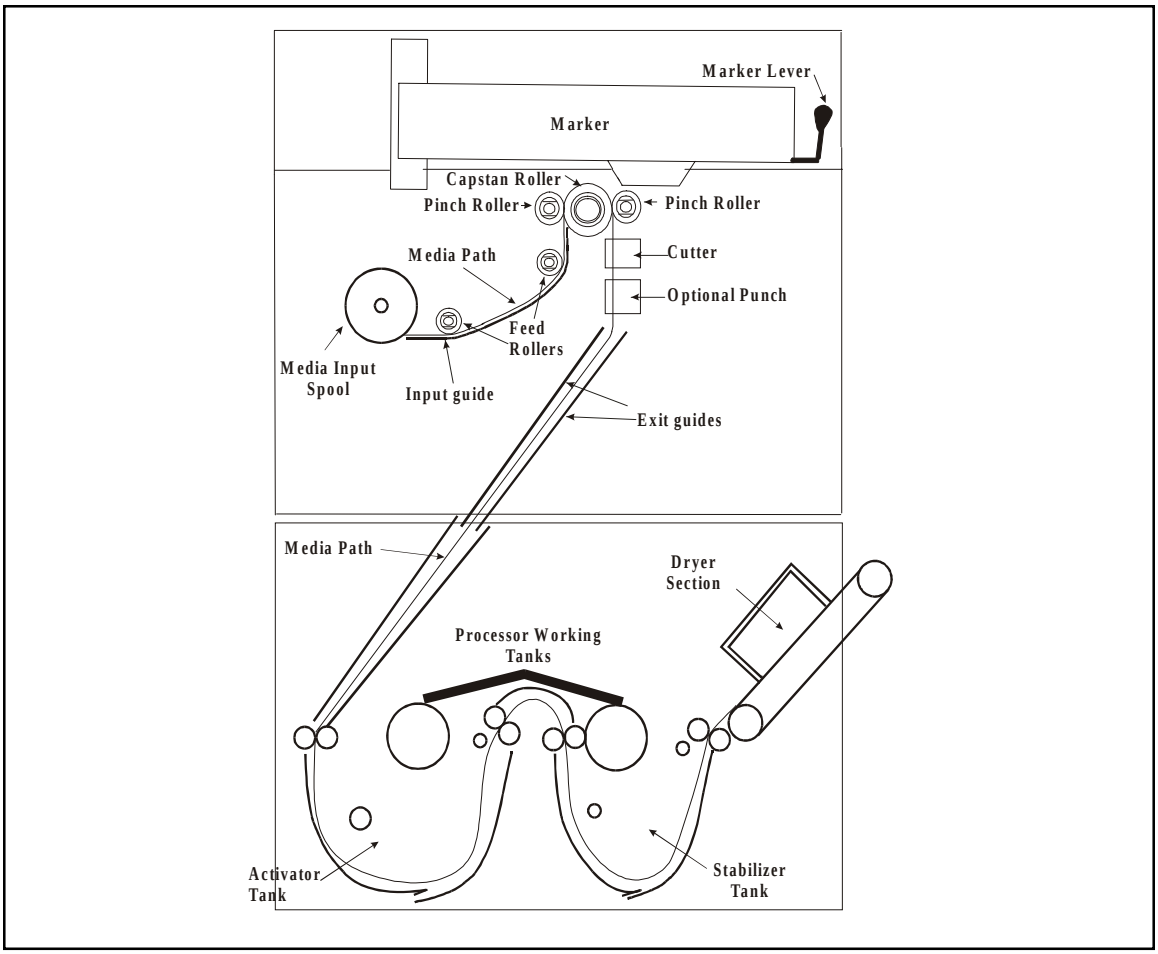


Figure 3-1 Side View of the PlateStream Platesetter Processor

Note: If the processor has not been in use for several days, the racks can freeze up due to evaporation causing rollers to stick together. The racks should be removed and rinsed with water and rotate the gears to free them up. Failure to do so can result in gear breakage.

Loading Plate Media

1. Open the top cover. Raise the marker by pulling the marker lever up until lever stops. Lift up on the marker gently. (See Figure 3-1). If you are replacing the roll of plate media, the last segment of the previous roll may need to be removed from the platesetter.

2. Remove the spool assembly from the Platesetter.

3. Adjust the **rear** edge guide inside the Platesetter by pulling the edge guide knobs up and sliding to the position closest to the plate media width. Adjust the **front** edge guides by loosening the screw and moving the guide all the way to the front.

4. Adjust the left hub on the spool shaft to match the edge guide position by squeezing the clip and sliding on shaft. Remove the right hub from the shaft by lifting clip and sliding off the shaft. Slide media onto shaft. Slide the right hub onto shaft by lifting clip and pushing down on spool until spool is tight against media (see Figure 3-3).

5. Place the spool assembly on the receptacles in the Platesetter. Feed media through rollers and two edge guides. Adjust the front edge guide by turning edge guide knobs counterclockwise and sliding edge guide until edge guide rests against plate media. Lock edge guide by turning knobs clockwise. Feed the media by hand up to the nip of the capstan roller and engage (hold down) the load switch for approximately 5 seconds. Watch so that the feed side of the capstan roller picks up on the media and begins to transport it. After the media has fed past the exit side pinch roller, release the load switch. Manually turn the exit side pinch roller approximately 2 turns counterclockwise to remove the loop, which may have formed over the capstan roller during the load. This last step will help the registration of the first few plates output from the platesetter after this load sequence as compared with previously processed plates or ones that may be processed later.

6. Gently lower the marker and lock down by pushing the marker lever down until the lever is horizontal. Close the top cover.

7. Set the plate width from the control panel setup menu. Load media from the control panel. Image one test plate from the control panel Test Plate menu.

Main Menu

NOTES:

- Cut off any punched area of plate before reloading to ensure a reliable load.
- Remove leader from daylight load media before loading media.
- Media must be loaded with no tears or wrinkles.
- Media must be reloaded after jams or other fault conditions. In this case, a message will appear on the operator panel to “Reload Media” or “Manually Reload Media.”
- The (Optional) Edge LED should be ON for plate widths more than 13.3", allowing a fully-exposed 13.4" plate (see chapter 2 in the section **More Information Menu**).

Main Menu

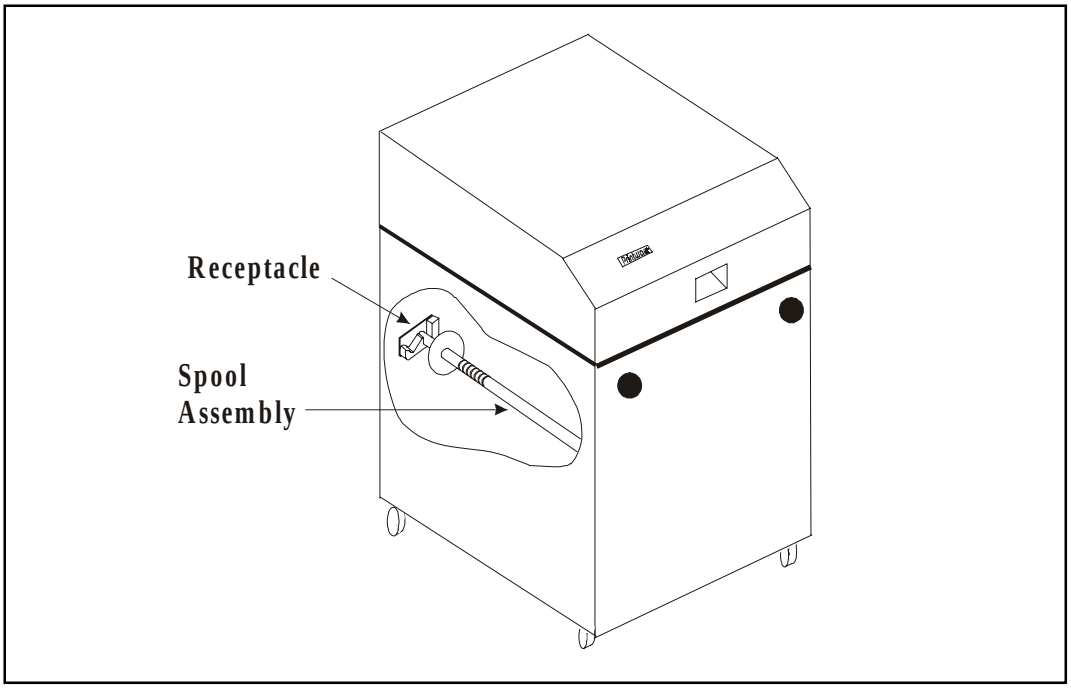


Figure 3-2 Location of Spool Assembly

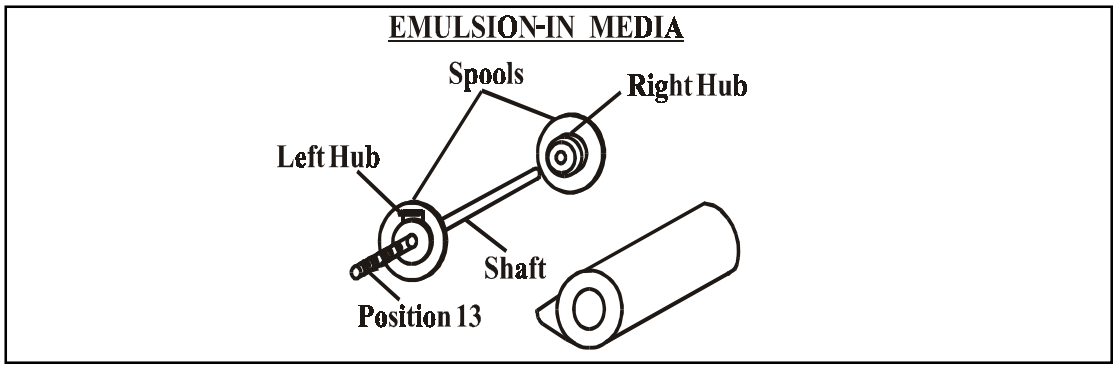


Figure 3-3 Loading Plate Media on Spool

Main Menu

Imaging Plates

1. **Configure RIP; Connect to the Network**

ZAPripHQ (Harlequin/Xitron) RIP

a. Press ctrl-alt-del to log on.
b. Log in as **Administrator** with password: **printware**.
c. Double-click on the ZAPrip icon.
d. Choose **Start Inputs** from the **Xitron RIP** menu to start the RIP.

2. **Print a Job**

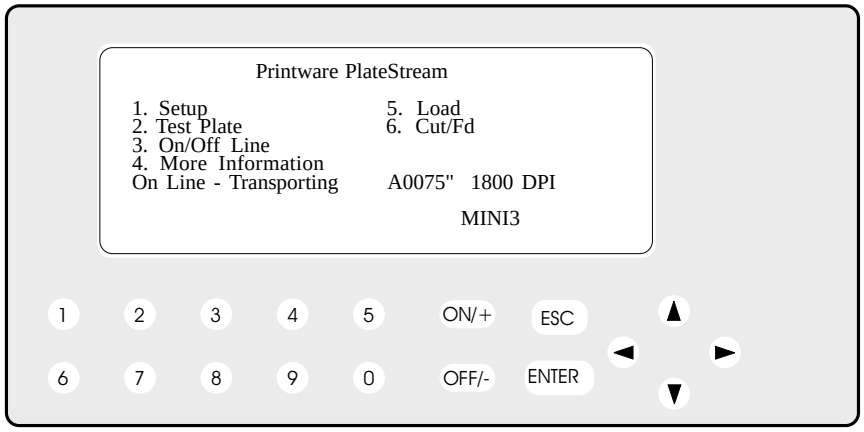
a. Be sure your front-end computer can see the network hot folder.
b. The ZAPrip HQ (Harlequin) RIP can use the Mac chooser as well as a hot folder. To set this up, use the chooser to select the desired PlateStream output device and resolution.
c. If a print driver is required, use Adobe 4.2 for WIN95/98, Adobe 5 for NT.
d. Create a test job whose document size is equal to the desired plate size.
e. Print the job, saving it as a PostScript file in the spool (“hot”) folder (or using the print command if using set up with Mac chooser).

Main Menu

MiniPlate™ Option

With the MiniPlate option, the Platesetter accommodates jobs shorter than the 12" minimum plate length by imposing several small jobs down the length of a plate. To turn MiniPlate on, change the destination to Processor MiniPlate in the Setup Menu (see chapter 2 in the section **Setup Menu**). The minimum job length is 1". MiniPlate accumulates shorter jobs until the combined length of the jobs exceeds an operator-selected cut length (*e.g.*, 12"). The plate material is then cut and run through the processor. MiniPlate cut length can be set from 12" to 18" in the More Information Menu (see chapter 2). The gap between jobs in MiniPlate Mode can be eliminated or set to a desired amount in the Calibrate Menu (see the **Physical Calibration** section of the INSTALLATION GUIDE). This calibration is enabled in the More Information Menu.

The **CUT/Fd** key '**6**' operation will cut and feed into the processor any MiniPlates remaining in the Platesetter. The extra material fed to bring the length up to the selected minimum length will be imaged black so as not to pick up ink on the press. The word '**MINI**' in the lower right corner of the main menu indicates that the Platesetter contains MiniPlates that have not been cut or processed. The following digit indicates the number of MiniPlates in the Platesetter, and if more than 9 MiniPlates are present the digit will be replaced by a **'+'.**



Main Menu

CHAPTER 4

OPERATING THE PLATESETTER

Making a Plate

Controlling Image Quality

To maintain optimum print quality, use only recommended media and processing chemistry, and store all supplies properly. Also, perform the preventive maintenance procedures detailed in Chapter 6 to keep the Platesetter clean and in proper operating condition. Be sure all Platesetter covers are completely closed when making plates.

Once per week (or more often if conditions require) print a test plate and inspect the print quality. If image quality problems are noticed, perform the following adjustments. Image quality problems may include slight changes in character stroke width, image density, or background density.

Refer to your RIP reference guide for instructions on printing a test plate. Inspect the plate. If image quality problems are found, adjust the exposure as described in the next section.

Adjusting Exposure (Laser Intensity)

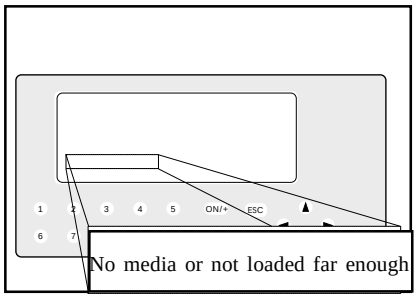
See CALIBRATION in Appendix B

Main Menu

Responding to Control Panel Error Messages

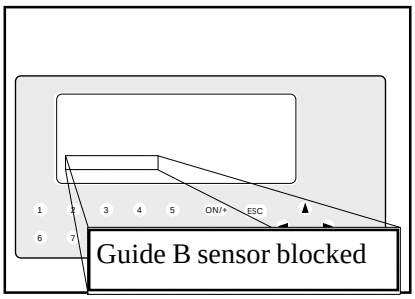
This section shows the different error messages which may be displayed on the Platesetter control panel. Next to each error message is the cause and the most probable solutions. When more than one solution is listed, try the first solution first; if it does not correct the problem, then try the next solution.

Once the problem is corrected, press the **ESC** key to clear the error message from the display. If the solution(s) listed does not correct the error, call your Printware-authorized technician to service your Platesetter.



CAUSE: The Platesetter is out of media or the media not loaded properly.

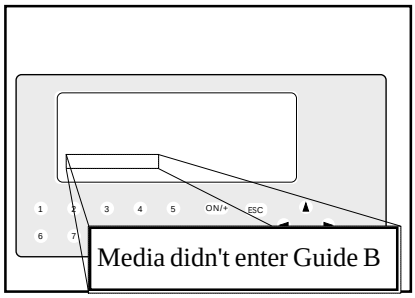
SOLUTION: See chapter 3 in the section **Loading Plate Media.**



CAUSE: The Guide B sensor is blocked.

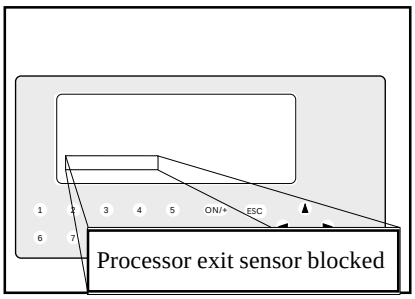
SOLUTION: Clear media path. See chapter 7 in the section **Clearing Media Path**.

Main Menu



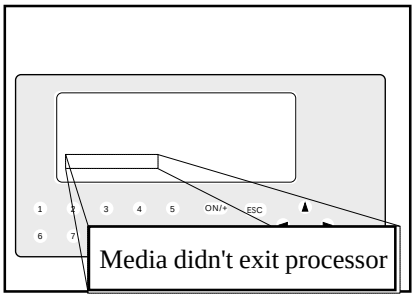
CAUSE: The leading edge of the media was not detected by the Guide B sensor within the expected amount of time.

SOLUTION: Clear media path. See chapter 7 in the section **Clearing Media Path**.



CAUSE: The sensor under cover G is blocked.

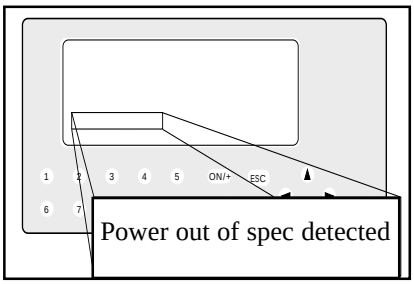
SOLUTION: Clear media path. See chapter 7 in section **Clearing Media Path**.



CAUSE: The leading edge of the media was not detected by the processor exit sensor within the expected amount of time.

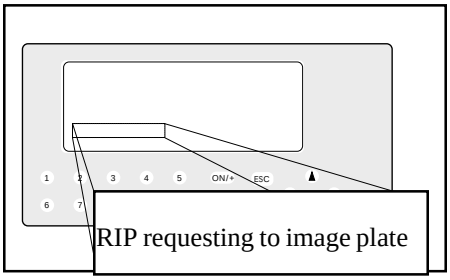
SOLUTION:
1. Clear media path. See chapter 7 in section **Clearing Media Path**.

2. Calibrate the processor. See chapter 2 in the section **Calibrate Menu**.



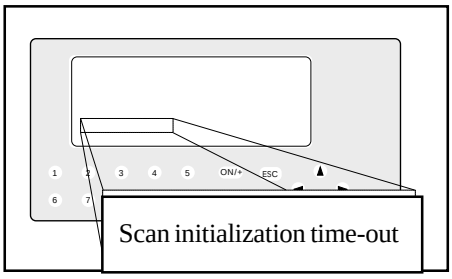
CAUSE: The Platesetter electronics have detected a problem with one of the power supply voltage levels during power up.

SOLUTION: Turn off the Imager and call for service.



CAUSE: A print job was sent to the Platesetter while it was not in the On Line state.

SOLUTION: From the Main Menu on the control panel, press **3** to return the Platesetter to the On Line state.



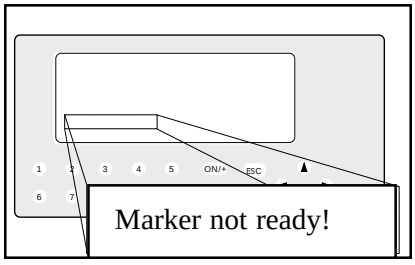
Cause: The marker unit did not power up correctly within the expected time.

SOLUTION:

1. Turn the Platesetter off, wait 30 seconds, turn the Platesetter back on and wait for the power up to be completed.

2. Call for service

Main Menu



CAUSE: The marker is not ready to image.

SOLUTION:

1. Turn the Platesetter off, wait 30 seconds, turn the Platesetter back on and wait for the power up to be completed.

2. Call for service.

Main Menu

SUPPLIES

Main Menu

CHAPTER 5

SUPPLIES

Introduction

Using recommended supplies ensures high quality printing plates and printed output. The Plateseter is designed to image silver halide-coated plate material. Silver-halide material is normally imaged negative right reading (see chapter 2 in the section **Setup Menu**). Plate media may be either paper or polyester based. Roll width may be from 7" to 13.4" (17.8 cm to 34 cm). The maximum roll length is 280' (85 M).

Main Menu

RECOMMENDED CONSUMABLES FOR PLATESTREAM SC

PRINTWARE: SILVERSTREAM+

RED LIGHT PLATE MEDIA:

	Emulsion In	
5 mil polyester	808555-XXX	(280 FT ROLLS)
8 mil polyester	808666-XXX	(280 FT ROLLS)

(Note: -XXX specifies the specific roll width from 7" to 13.4")

CHEMISTRY:

ACTIVATOR: 808777-001
STABILIZER: 808777-002

Main Menu

Tips on Supplies

To get the best performance from your Platesetter, follow these guidelines for storing and handling supplies.

Plate Media

- Handle imaging media by the ends.
- Avoid excessive touching of the surface of the media.
- Store media rolls upright (on end), not on their sides.
- To prevent the crushing of media, avoid placing other objects on top of the media rolls.
- Store all media as recommended by the manufacturer.
- Plate material will absorb moisture in humid environments and lose moisture in dry environments, which will affect print quality. However, the plate material may not be permanently damaged. Improperly stored plate material will recover if stored for an extended period with the bag open in ideal humidity conditions.
- For optimum print quality, use only recommended media.
- Do not load media that is wrinkled or torn.

Processing Chemistry

- Use only recommended processing chemistry.
- Carefully follow all label instructions for mixing and use.
- After use, recap activator and stabilizer solution bottles tightly.
- Store all chemicals in a well-ventilated area. Follow the manufacturer's instructions regarding safety, storage, temperature, humidity, and other environmental factors.
- Rotate supplies to use the oldest items first.
- Disposal of all chemicals must meet local environmental codes.

Main Menu

CHAPTER 6

PREVENTIVE MAINTENANCE

Introduction

To avoid problems with the Platesetter, maintain high print quality, and to avoid unnecessary service calls follow the instructions in this chapter.

- Keep all equipment clean and well maintained.
- Perform regularly scheduled preventive maintenance.
- Carefully follow instructions for the mix and use of chemistry. Ink and press chemistry must be compatible.
- Keep all solutions filled to the proper levels.
- Handle plate media carefully.
- Mount plates on the press properly.

Operator Maintenance Schedule

1. Follow the "Printware Recommended Periodic Maintenance Schedule" in the Service manual.

Main Menu

Maintenance Procedures

Cleaning the Imager Rollers

Clean all the Imager capstan rollers when necessary to prevent plate slippage or plate skew. It's easiest to clean the rollers just after the spool has run out of media. To clean these rollers:

1. Open the top cover. Raise the marker by pulling marker lever up until lever stops. Lift up marker gently (see Figure 6-1).

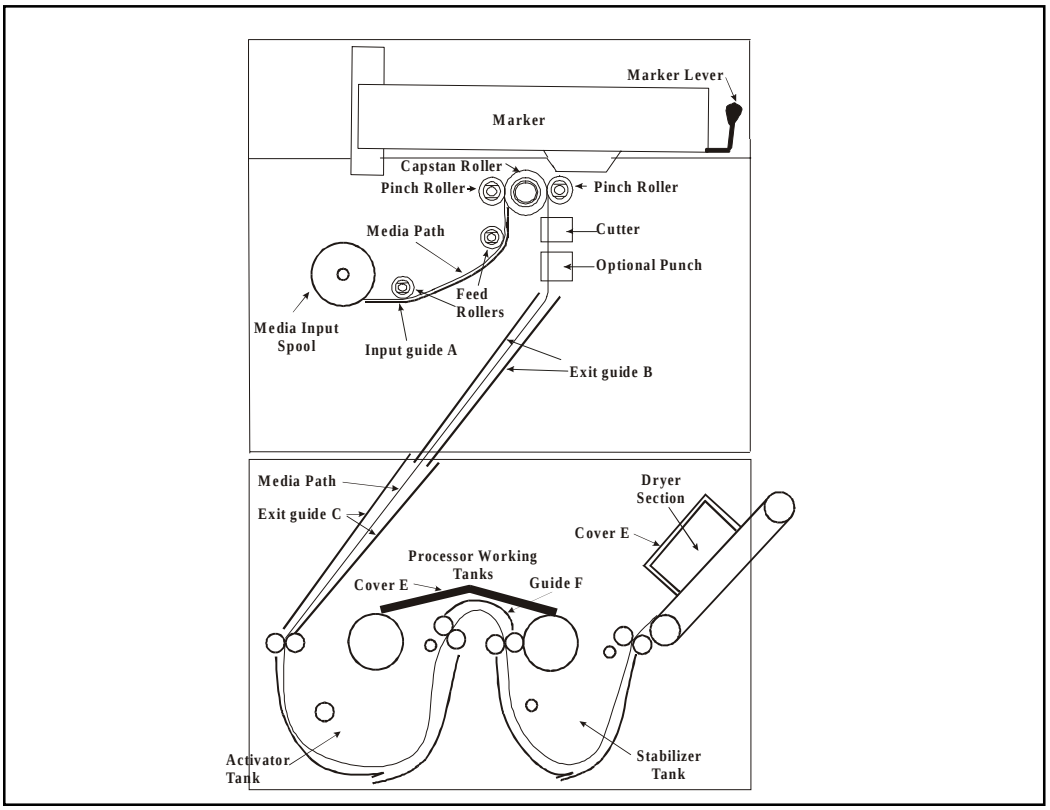


Figure 6-1 Side View of the PlateStream Platesetter

****

CAUTION! Be very careful when working on or around the Imager rollers with the machine running, especially when wearing a tie or loose-fitting sleeves, to avoid getting anything caught between the rollers.

****

2 . From the Main Menu display on the control panel, press **'4'** and then **'1'** to access the Run Hardware Menu.

3. Turn on the capstan motor by pressing the **'2'** key and then the **'ON/+'** key. Access the rollers from the top of the Platesetter and open the shutter. As the pinch and capstan rollers are rotating, clean them using a soft cloth and D-Ink. Press the **'OFF/-'** key to turn off the transport motor, then press **'ESC'**.

4. Press the **'ESC'** key again to return to the Main Menu, then press the **'3'** key to return the Platesetter to the on-line mode.

5. Gently lower the marker and lock by pushing marker lever down until lever is horizontal. Close the top cover.

Main Menu

Cleaning the Processor Module

For optimum performance of the processor module, it is important to keep all chemistry filled to the proper levels, and clean the machine weekly to prevent a buildup of chemistry on the rollers. The processor should be cleaned more frequently if needed to maintain plate quality. If you're using Mitsubishi Silver Digiplate, the processor should be cleaned if the pH of the chemicals fall *outside* the recommended range:

Activator: pH > 12.8
Stabilizer: pH < 6.8

To clean the processor (see figure 6-1):

1. Open the top cover. Be sure that the effluent tank is empty before beginning this procedure. Place the effluent drain hose from underneath the processor into the effluent tank. Drain the processor working tanks by removing the overflow tubes located in the rear of the processor tanks inside the Platesetter.

2. Remove cover E. Remove guide F by pressing guide towards the back of the Platesetter, lift guide from the front of the Platesetter and remove. Wash cover E, and guide F, in warm soapy water and dry using a soft cloth.

3. Remove Activator and Stabilizer racks. Clean the processor working tanks using warm soapy water, and dry with soft cloth. Clean Activator and Stabilizer racks using warm soapy water. Rotate the rollers and clean them using a soft cloth and warm soapy water. Replace the Activator and Stabilizer racks to original positions. Replace guides and cover to original position.

4. Remove cover G. Remove dryer rack by holding the metal edge in the center of the dryer rack, lift to clear the two bottom pins, and remove. Wash cover G and dryer rack in warm soapy water and dry using a soft cloth. Replace dryer rack and cover G to original position.

5. Close top cover.

Main Menu

CHAPTER 7

TROUBLESHOOTING

Print Quality Troubleshooting

PROBLEM	CAUSE	SOLUTION
'Scumming' (ghost images, smudges or blotches on prints due to poor plate surface)	1 The press ink/fountain balance is incorrect.	1. Correct the balance.
	2. The press fountain mixture is incorrect or too weak.	2. Use the recommended fountain solution, properly mixed.
	3. The press ink is not compatible with the other chemicals.	3. Use the recommended ink.
	4. The press dampener form roll pressure is out of adjustment.	4. Adjust the pressure.
	5. The press Moleton cover or sleeve is contaminated.	5. Replace the cover or sleeve.
	6. The Platesetter Processor chemistry is depleted.	6. Replace Platesetter Processor chemistry.

Main Menu

PROBLEM	CAUSE	SOLUTION
Image Binding (faint reproduction)	1. The press ink/fountain balance is incorrect.	1. Check the balance and correct if necessary.
	2. The press pressure is insufficient.	2 Check the pressure and correct if necessary.
	3 The press ink rollers are glazed.	3. Deglaze the rollers.
	4. The paper is clinging to the press blanket.	4. Check the paper supply and clean the blanket.
	5. The press fountain concentration is too strong.	5. Replace with correct concentration.
	6. The press blanket was not dry on roll-up.	6. Allow the blanket to dry before roll-up.
	7. The press blanket is glazed.	7. Deglaze the blanket.

Main Menu

PROBLEM	CAUSE	SOLUTION
Slow Roll-up or Poor Ink Transfer	1. The press fountain concentration or ink is incorrect.	1 Check and replace if necessary.
	2. The press ink/fountain balance is incorrect.	2 Check the balance and correct if necessary.
	3. The press rollers or blanket is glazed.	3. Deglaze the rollers or blanket.
	4. Press pressure is insufficient.	4. Check the pressure and adjust if necessary.
Weak or Uneven Image (lose fine lines, pinholes in solids)	1. Exposure (laser intensity) is set too high.	1. Adjust the exposure in the Platesetter Setup menu on the control panel per plate Media Manufacturer's instructions.
Fuzzy or Blurry Image	1. Platesetter processor chemistry is dirty.	1. Clean processor and replace processor chemistry.
	2. Laser is out of focus.	2. Call for service.
Marks on Plate or Scratched Plates	1. The Platesetter rollers are dirty.	1. Clean the Platesetter rollers.
	2. Bad plate material.	2. Replace the plate material.
	3. Platesetter processor chemistry is dirty.	3. Replace processor chemistry.

PROBLEM	CAUSE	SOLUTION
Plugged Images or Excessive Background	1. The exposure is set too high.	1. Adjust the exposure using the Platesetter Setup menu on the control panel.
	2. Bad plate material.	2. Replace plate material.
Wrinkled/Cracked Plates	1. The press plate clamp is improperly set.	1. Check handling techniques when mounting plates, and check the uniformity of the plate clamp.
Plates have Short Press Life	1. Press pressure is excessive.	1. Adjust the pressure.
	2. Press blanket surface is too harsh.	2. Change to a softer, smoother blanket.
	3. There are abrasive particles in the press ink.	3. Replace the ink.
	4. The press ink/fountain balance is incorrect.	4. Adjust the moisture control on the press to minimum.
	5. The press ink is too tacky.	5. Replace the ink or add reducer.
	6. Platesetter Processor chemistry is depleted.	6. Change Processor chemistry.
	7. Marker out of focus.	7. Call for service.

Main Menu

PROBLEM	CAUSE	SOLUTION
Toning/Specking (Background)	1. Plate media has abrasions.	1. Handle plate media more carefully.
	2. The press ink is emulsified.	2. Change the fountain solution and the ink.
	3. The press fountain solution is contaminated.	3. Change the fountain solution. Use only distilled water for preparing solution.
	4. The Platesetter rollers are dirty.	4. Clean the rollers.
	5. Platesetter Processor chemistry is weak.	5. Change processor chemistry.
Smeared Images, "Tails" on Characters	1. Plate media defective/incompatible.	1. Change plate media.
	2. Too much press ink.	2. Clean up press and reduce ink.
Weak Image on Press	1. The press fountain solution is contaminated.	1. Replace the fountain solution. Be sure to use distilled or deionized water for preparing the solution.
	2. The roller pressure on the press is incorrect.	2. Check the stripes (pressure between the press rollers).

Main Menu

General Troubleshooting

PROBLEM	SOLUTION
The Platesetter will not Turn ON (No Power)	1. Ensure that the Platesetter is plugged in. 2. Check the fuse or breaker for the outlet. Try unplugging the Platesetter and plugging another electrical item into the outlet to be sure that it has power.
Platesetter will not Start a Print Job	1. The Platesetter may not have completed its power-up sequence. When the Platesetter is ready, the Main Menu will be displayed on the control panel with On Line indicated and no error messages. 2. If an error is reported on the control panel, correct the problem following the procedure in Chapter 4, then press **'ESC'** and **'3'**. 3. Ensure that the interface cable between the RIP and the Platesetter is securely connected at both ends. 4. Cycle the Platesetter power. 5. Reboot the RIP.
"Reload Media" or "Manually Reload Media" message; Platesetter will not Start a Print Job	1. Media must be reloaded after jams or other fault conditions to prevent a reoccurrence of the jam. 2. "Reload Media" message should clear after reloading. 3. If message does not clear, check for defective sensor.

Main Menu

PROBLEM	SOLUTION
No Plate Exits from Platesetter	1. Ensure that the Platesetter is not out of plate media. 2. Ensure that the plate media is properly loaded and aligned. 3. Open the covers and check media path. See chapter 7 **Clearing Media Path.**
Plates Jam	See chapter 7 **Clearing Media Path**.
Skewed, Wrinkled or Torn Plates	1. Ensure that plate media is properly loaded. 2. Clean the rollers (see Chapter 6). 3. Replace the plate material.

Main Menu

IN CASE OF TROUBLE

PROBLEM	SOLUTION
White, Black or Silver Streaks on the Plates	1. Clean processor and replace chemistry.
Brown Haze on Plates	1. Clean processor and replace chemistry. 2. Clean the processor rollers.
Wet Plates	1. Check that the dryer is functioning. 2. Check that the dryer temperature is approx 110^0 F. Adjust if necessary. 3.. Clean the dryer 4. Clean the processor and replace the chemistry.

Main Menu

Clearing Media Path

1. Open the top cover. Raise marker by pulling marker lever up until lever stops. Gently lift up the marker (see Figure 7-1).

2. Remove imager front panel.

3. Inspect media path for jammed media in the areas described below. Access the media path through the top and front cover of the Platesetter.

   Guide A- Examine infeed section for jammed media.

   Capstan- Inspect capstan roller for media wrapped around it. Open the shutter if necessary. The shutter is located on top of the capstan roller.

   Guide B- Examine this exit guide for jammed media.

   Guide C- Examine this exit guide for jammed media.

   Guide F- Remove cover E. Slide Guide F toward the rear of the Platesetter. Lift the front end of the guide and remove.

   Cover G - Use the handle to remove.

3. After locating the area of the media jam, cut the media from the operator panel (Run Hardware Menu - '**4**'). Remove all loose media in the Platesetter.

4. If media is wrapped around the capstan roller, back up the transport rollers from the operator panel (More Information Menu - '**4**'). To stop the transport roller, press the '**ESC**' or '**OFF**' key.

5. Replace all guides to the original positions. Gently close the marker and lock it by pushing down the marker lever. Reload the plate media.

Main Menu

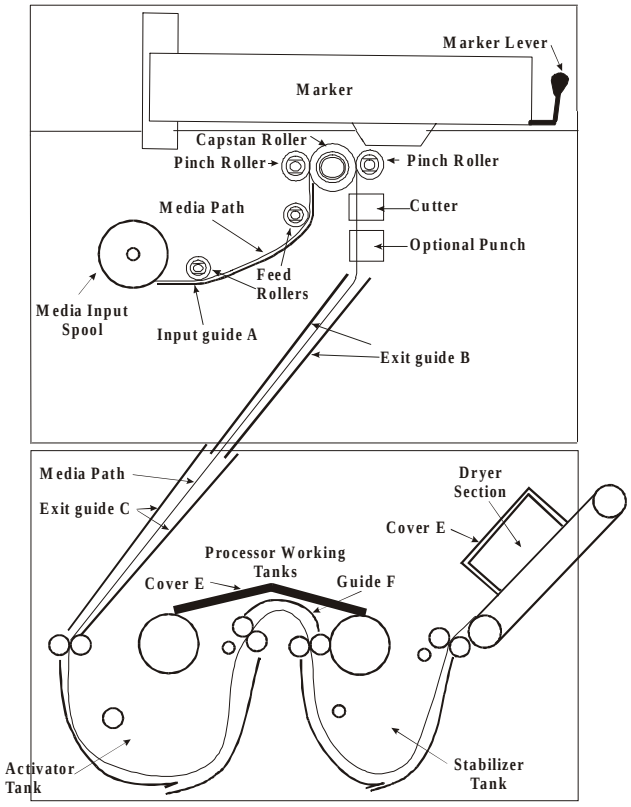


Figure 7-1 Clearing Media Path

Calling For Service

Overview

To avoid most problems, keep equipment clean and follow directions on all imaging and printing supplies.

Attempt to resolve the problem before calling for service. Use the procedures and troubleshooting guidelines outlined in this manual. If the problem still cannot be resolved, then follow the procedure outlined below.

Also call on an authorized service technician to perform preventive maintenance as required.

Steps for Calling for Service

1. Observe and write down the control panel error display (if applicable).
2. Turn off the Platesetter.
3. Write down the Platesetter model number and serial number (located on the rear cover).
4. Be prepared to provide the service technician with a complete description of the problem.
5. Only an authorized service technician should be allowed to service the Platesetter.

If you are unsure of whom to call to arrange for servicing, then call Printware's Customer Service Department at (800) 456-1400.

Main Menu

APPENDIX A

SPECIFICATIONS

Resolution:	2400 dots per inch (dpi) Up to 175-line per inch (70-line per cm) screen rulings
Imaging Throughput:	14 in./min. (34 cm/min.) at 2400 dpi
Processing Throughput:	36 in./min. (46 cm/min.) at 2400 dpi
Image Width:	13.4" (34 cm; 81 picas)
Plate Size:	13.4" x 22" max.; 7" x 12" min. (34 x 56 cm max.; 17.8 x 30.5 cm min.)
Plate Cutter:	Automatically cuts to size
Waste Reduction Mode:	Reduces leader to 0.7" (1.8 cm)
Miniplate Option:	Integrated imposition software allows up to 5 images per plate
Exposure Laser:	650 nm red laser diode
Spot Size:	25 micron nominal diameter
Repeatability:	±0.001" (25 microns) typical (4 consecutive plates)
Image-to-Edge Accuracy:	±0.003" (75 microns) typical

Main Menu

User Settings

Right/wrong reading and reverse
Laser intensity (0-100%)
Variable Image offsets

Recommended Media

SilverStream Silver-halide polyester plates, 0.004" to 0.008" thick

Integrated Processor

Adjustable area-based automatic replenishment
36" per minute
Two-bath design
Adjustable developer bath temperature (75°F - 95°F; 24°C - 35°C)
Adjustable dryer temperature (75°F - 140°F; 24°C - 60°C)

PunchStream Option

Integrated punch option for Bacher C2000 or pin-bar patterns (others available on request)
Punching repeatability: ±0.001" (25 microns)

ZAPrip® Raster Image Processor

ZAPrip HQ (Harlequin interpreter)

RIP Interface Options

Novell, NetWare, Mac AppleShare, TCP/IP, PAP, NetBEUI

Main Menu

Physical Dimensions

Dimensions:	47" h x 29" w x 33" d
Weight:	500 lbs.

Environment

Electrical Requirements:	220/240V, 50/60Hz 4400 VA
Temperature:	65°F - 80°F (18°C - 27°C) operating -40°F - 150°F (-40°C - 65°C) non-operating

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CALIBRATION

Introduction

This appendix provides tips for calibrating the PlateStream. Following these procedures will provide the best results, especially when printing screens. Calibration has two major steps:

I. Setting maximum density (D_{max}) in solid black areas by adjusting the laser power.
II. Linearization of the dot percentage transfer curve by calibrating the RIP.

PlateStream users doing critical screens have found it helpful to calibrate the platesetter weekly(or more often if required) and replace the processing chemistry every week or two depending on use.

I. Setting Maximum Density

Before calibrating dot density, maximum density (D_{max}) is set by adjusting laser power from the PlateStream operator panel. There are several ways to do this:

A. Using an exposure file:

1. From the RIP, run file 805346-1.ps using the lowest resolution that your PlateStream is set up for (i.e. 2400 for the PlateStream SC). Use a page setup from the RIP that corresponds to this resolution.
2. With the unaided eye, look at the 3x3, 4x4, and 8x8 checkerboard patterns. Note: for the PlateStream SC ignore the 1x1 and 2x2 patterns as they will nearly always be too dark.
3. If all 3 patterns look the same density – the same grey level – the image power is correct.
4. If the patterns get lighter grey going from 8x8 to 3x3 with 3x3 being the lightest, the image power is set too low. Increase the image power and run the file again. Again look at the patterns to determine if the grey level is acceptable. (This image power is made from the op panel main menu as follows: #1) Setup, enter. (Verify that the resolution shown after #2) is the same as you ran the file at). #3) Image Power (type in a higher (or lower) image power setting number), enter. Then re-run the file.

Main Menu

5. If the patterns get darker grey going from 8x8 to 3x3 with 3x3 being the darkest, the laser power is set too high. Decrease the laser power and run the file again and again look at the patterns to determine if the grey level is acceptable.

NOTE: At 2400 dpi resolution, often times a change of 1 power level will result in a visible change in grey level on the printed patterns.

B. Measuring Solid Black Areas:

a. Run a calibration target or a test plate and measure the density of a solid black area using a reflective densitormeter.

b. Set laser power to yield .06 (+/- .02) below the fully exposed density reading. Note that ".04" below the fully exposed reading will be more tolerant of variations in media from roll to roll or variations in chemistry temperatures and strengths. A ".08" reading below the fully exposed reading will give you finer text or finer lines and longer press run length.

c. If the density reading is *less* than optimal D_{max}, *increase* the laser power. If the reading is *greater* than optimal, *reduce* the laser power. (**Tip:** as a rough rule of thumb, change the laser power by 1% for each .01 density change needed).

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II. Calibrating the ZAPrip HQ (Harlequin) RIP

The goal of calibrating the RIP is to linearize the transfer curve. Figure 1a shows a calibrated transfer curve, and Figure 1b shows a non-linear (uncalibrated) transfer curve.

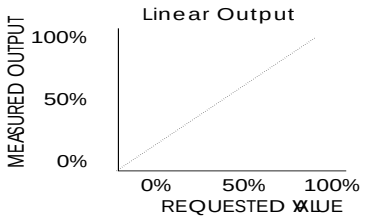

Figure 1a

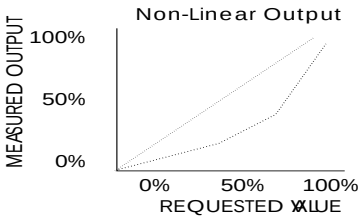

Figure 1b

The *ZAPrip HQ* (Harlequin) RIP **Print Calibration** menu allows you to print test strips (calibration targets). **Calibration Manager** allows you to create and edit calibration sets, and to enable or disable particular sets.

Calibration (Dot Gain) Manager displays calibration sets grouped by device. When you select from the **Device** drop-down list, all of the existing calibration sets for that device are displayed. The basic calibration steps are as follows (see the RIP manual for detailed procedures):

1. Select **Print Calibration** to print an uncalibrated target (see Figure 2).

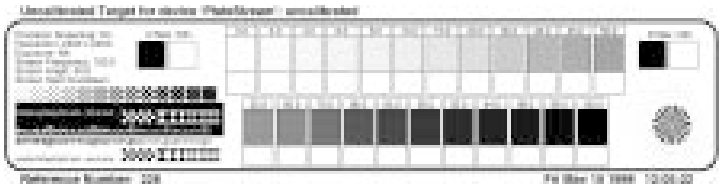

Figure 2: Calibration Target

2. Measure the density of each square of the target with the densitometer. Note that the densities marked on the target are reversed, e.g., the 10% square will be marked "90%." (**Tip:** Some densitometers require special procedures to measure densities of less than 10%; consult your densitometer manual).

3. Click **New** to create a new calibration set for the first time. The RIP manual describes how to use all the items in the Edit Calibration dialog box, but the essential items are as follows:

a. Set the PlateStream for "negative right-reading."
b. Set **Measurements as** "negative % dot."
c. Check **Negative media** for film (plate material is positive media)
d. Check **Force solid colors**, indicating that the PlateStream is a halftone device.
e. Enter the dot percentages from the densitometer readings.
f. In the **Warning criteria** panel, enter the settings used to create the target: resolution, dot shape, and the range of screen frequencies for which this calibration set can be used.

4. Save the set by clicking the **OK** button in the Calibration Manager dialog. If you click the **Cancel** button in the Calibration Manager dialog, you lose the changes.

5. Select a calibration set from the **Calibration** drop-down list in the Page Setup dialog box in order to associate it with a page set up.

6. Print a calibrated target to check calibration. A single-pass new calibration should be accurate to within about 2%. For greater accuracy, you can do a second calibration iteration by editing the values in the calibration set with the densitometer readings from the calibrated target (**Edit from calibrated target**).

7. Repeat this process for each resolution, screen, and media combination to be calibrated. You may need to calibrate only those combinations you use for critical work.

APPENDIX C

Halftoning

Printware RIPs provide a number of options to control halftone generation. Using them appropriately can improve the quality of your image. This section gives an overview of halftoning; see the RIP manual for more details.

Halftoning is the process of approximating gray levels or color shades with a pattern of dots. In many halftoning systems, the dots can have only one color value but can vary in size to alter the ratio of dot color to background color. The simplest use of this technique is approximating gray levels with a pattern of black dots against a white background, as illustrated in Figure ApB-1. Here, the size of the dots varies to represent different shades of gray. You see an area of small dots as a light gray, while an area of larger dots (each nearly filling its allowed space in the pattern of dots) is seen as dark gray. More strictly, it is not the size of the dots but the resultant ratio of black area to white area that represents the gray value.

Color shades are approximated with three patterns of dots, each in a primary color — cyan, magenta, and yellow — used with or without a fourth pattern of black dots. (This description of halftoning assumes three patterns—in fact, the fourth pattern of black dots is almost always used, for technical reasons that do not affect the principles of halftoning.) Within each color separation, the size of the dots (in relation to their background) is proportional to the amount of the primary color in the composite shade. When the separations are combined, typically by overprinting in registration, they create the illusion of shades of color. The cyan, magenta, and yellow dots cannot be distinguished when viewed from a distance—instead, the pattern of color dots appears to be an area of a shade of color.

Halftoning can be specified in the front-end application, or can be overridden and specified in the RIP. The three halftone parameters to be specified are:

1. The shape of the dots created.
2. The frequency and angle of the dot pattern.
3. The screening algorithm, i.e., conventional AM or enhanced (“supercell”) screening.

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Dots, Halftone Cells, and Screens

Dots are the visible part of halftoning and most halftoning can be described in terms of patterns of these dots. The industry-standard terms used to describe the organization of these dots into manageable structures are halftone cells and screens. Each dot is considered to occupy a halftone cell. (Figure ApC-1 shows two groups of four halftone cells.) Every halftone cell is used to represent a gray level or color intensity. A dot can have any area in the range 0% of the area of the halftone cell (a completely white cell) through 100% of the area of the halftone cell (a completely black cell). Dots of intermediate areas create the illusion of gray levels. The number of pixels in the halftone cell defines how many intermediate areas of dot are possible and, in most systems, this defines the number of reproducible grays.

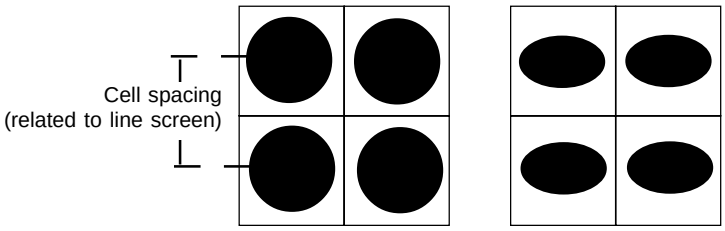

Figure ApC-1. Halftone cells, Screen Frequency, and Dot Shapes

A screen is an invisible grid that is superimposed on the image — each square in the grid is a halftone cell. For a particular dot shape, the important characteristics of a screen are its spatial resolution, referred to as screen frequency, and the screen angle (as shown in Figure ApC-2).

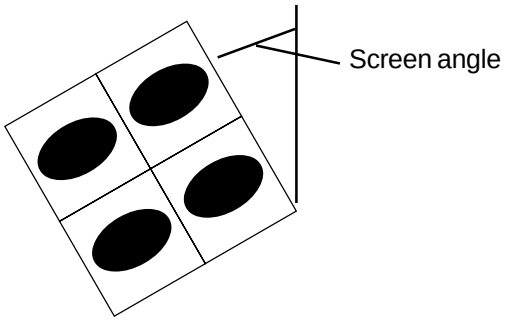

Figure ApC-2. Screen Angle

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Recommended Settings

The best halftone strategy depends on the type of work, media, resolution, and press characteristics, but Printware makes the following recommendations for PlateStream computer-to-plate systems as a starting point:

- **Euclidian dots**—Figure ApC-2 shows circular and elliptical dots, but dots can have other shapes. These are described in detail in the RIP manual. Euclidian dot shapes vary with the screen to minimize perimeter to area ratio, which make them a good general purpose dot for black & white or color printing.

- **133 to 150-line Screens; Default Angles**—Silver-halide plate materials support a maximum of 175-line screens, but accuracy and calibration become more critical the higher the screen.

- **Enhanced AM screens** (also called "supercell" screens). These screening algorithms allow more precise screen frequencies and angles (e.g., if the application calls for a 150 line, 45° screen, the separation will be reproduced more exactly with supercell screening. Without supercell screening selected, the separation screens might be approximated with a variety of different screens and angles, causing moiré). Supercell screening also reduces moiré and smooths transitions in gray levels. Enhanced AM screens are called "Harlequin Precision Screens" (HPS) on the ZAPrip HQ (Harlequin/Xitron) RIP.

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CHAPTER 1

GENERAL INFORMATION

This Platesetter has been certified as a Class 1 laser product under the U. S. Department of Health and Human Services (DHHS) Radiation Performance Standard. This standard is in accordance with the Radiation Control for Health and Safety Act of 1968. A Class 1 certification means the Imager does not produce hazardous laser radiation.

Observe proper Electro-Static Discharge (ESD) procedures at all ti mes during maintenance of this equipment, especially when servicing the RIP. ESD can damage sensitive micro electronic circuitry, leading to immediate failure or gradual degradation of performance over time. Observing the following precautions will help to prevent ESD damage to components:

Always keep PCAs in anti static bags during transport or at any time when removed from the machine. Never lay them down unprotected unless working at a static-protected workstation.

- Wear a ground strap attached to your wrist and to the frame of the machine.
- Always keep ESD in mind when working on electronic equipment.
- Use grounded or nonmetallic tools whenever possible.
- Do not attempt to open the inner covers, other than described in this manual.

Be especially careful when working on or around the following areas of the Platesetter:

- Marker
- Power Supply Assembly
- Processor

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The Platesetter is controlled by a Raster Image Processor (RIP); several different RIP options are available, depending on the most common type of work to be done. The system is driven by the host computer on which the operator composes the text and graphics to be imaged. Once the print job has been composed on the host computer, it is sent to the RIP, where it is prepared for imaging. The rasterized file is then sent to the Platesetter where the file is imaged onto a plate. Figure S1-1 illustrates the basic system setup. Figure S1-2 illustrates the dimensions and external features of the Platesetter.

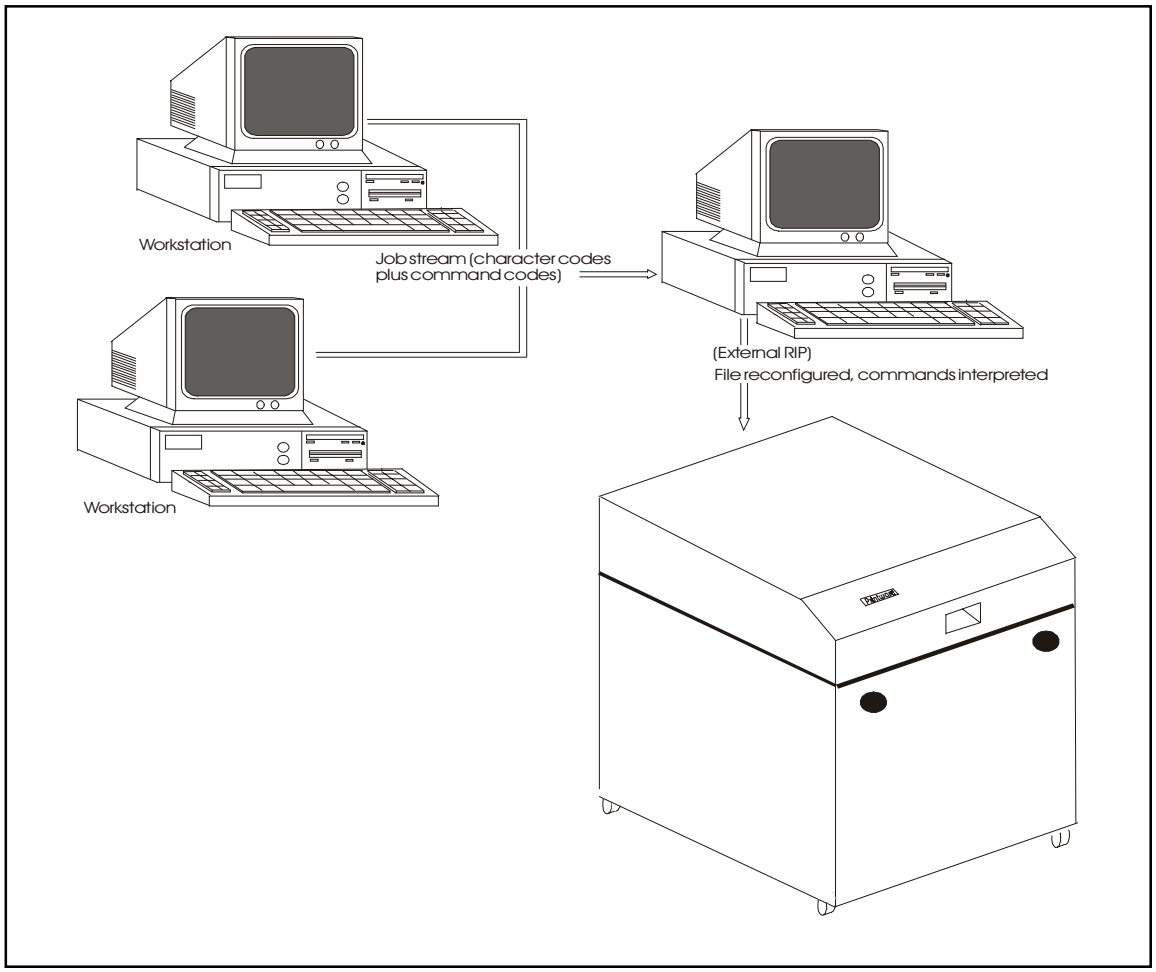

Figure S1-1 Interface Between the Host Computer, RIP and PlateStream

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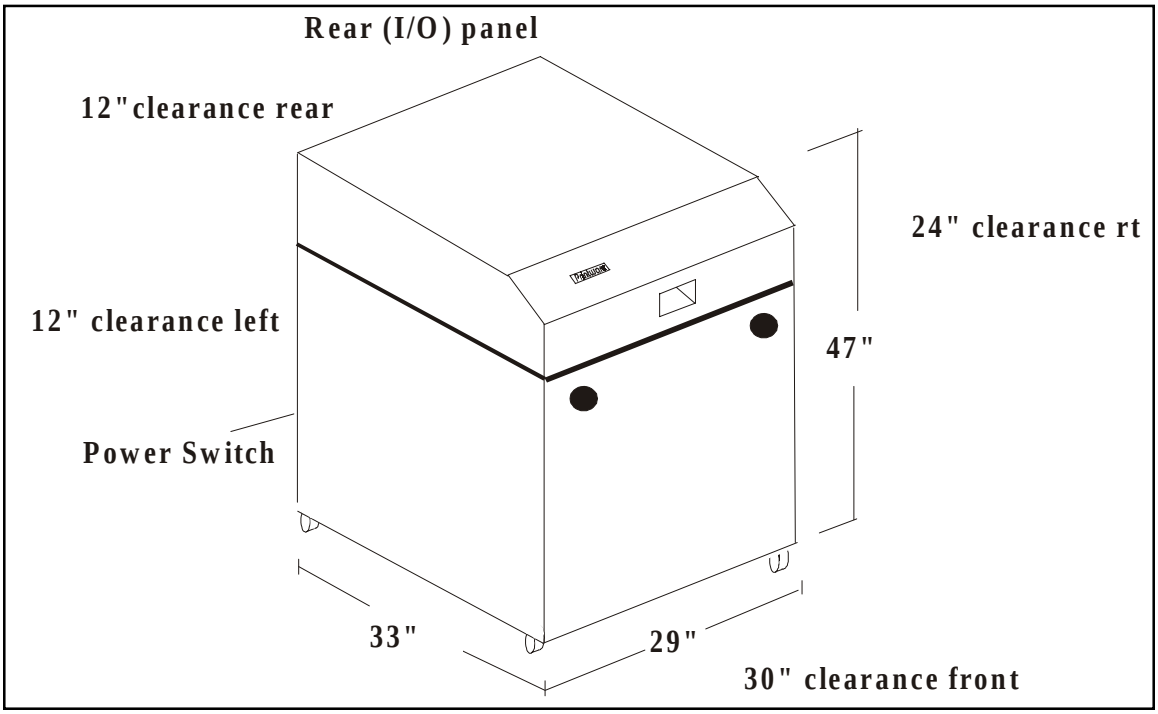

Figure S1-2 External Features of the PlateStream Platesetter

Construction of the Platesetter

The five major component areas of the Platesetter are:

- Imager Assembly
- The Marker
- The Power Supply Assembly
- Cables and Electronics
- Processor

Imager Assembly

The Imager Assembly consists of the following:

- Spool Assembly
- Capstan Roller
- Left and Right Pinch Rollers
- Capstan/Pinch Roller Stepper Motor/Drive System
- Cutter

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Marker

This section consists of the following:

•Marker Assembly; Includes Laser Diode, Laser Lens Assembly, Galvanometer, Mirrors, SOS and SOT Sensors.

Power Supply Assembly

The power supply assembly consists of the following:

•Power On/Off Switch
•20 Amp Circuit Breaker
•Electromagnetic Interference (EMI) Filter
•Power Distribution PCA
•Cooling Fan
•Multi-output Power Supply
•External Connectors J1-J5

Cables and Electronics

This group of components consist of the following:

•Controller PCA
•Interface PCA
•Processor PCA
•Stepper Motor PCA

Processor

This group of components consist of the following:

•Activator Tank and Rack With Rollers
•Stabilizer Tank and Rack With Rollers
•Dryer
•Drive System

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CHAPTER 2

MAINTENANCE

For physical calibration procedures see the PlateStream Platesetter Installation Guide.

This chapter identifies which subassemblies within the Platesetter require lubrication, details the procedures for lubricating the assemblies, and shows the recommended frequency for performing each procedure. This chapter also includes information on other preventive maintenance procedures.
Performance of lubrication and preventive maintenance procedures is essential to keep the Platesetter in proper operating condition and to maintain optimal image quality. Keeping the Platesetter and its surrounding area clean is also important. Wipe excess oil from all parts after performing lubrication procedures.
Perform these procedures at the time intervals shown in the **Platesetter Maintenance Schedule** section to keep the Platesetter operating properly and avoid unnecessary repairs.
For detailed drawings and Printware replacement part numbers see the PlateStream Platesetter Parts Manual.

Approved Lubricants

The following lubricants are the only ones approved for use on the PlateStream.

•Mobilith SHC 460
•Silicone Stick Lubricant

Cleaning Supplies

Marker Mirrors:
•Compressed air; recommend type in Ultrajet E-Series Precision Dust Remover
• Acetone
• 100% pure cotton, non-woven, lintless, non-scratching fabric such as Webril Wipes

Imager rollers:
- •Non-linting soft cotton cloth
- •Cleaning/refreshing solvent: Recommended type is D-Ink

Processor Rollers:
- •Non-linting soft cotton cloth
- •Warm soapy water

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Printware Recommended Periodic Maintenance Schedule

(Recommendations based on 8 hours per day use, 5 days a week)

1. Imager section maintenance (Weekly)

    ❑ - Roller cleaning (damp cloth, light D-ink, no alcohol or solvents)

    ❑ - Clean or replace fan filter.

    ❑ - General cleaning of dust/dirt from imager area.

    ❑ - Clean out any punch chips from (optional) punch area of machine

    ❑ - Check lubricant level in (optional) punch compressor. When the compressor is running the sight glass should be half full. Add Printware part number 901176-002 lubricant up to the half full mark if low. Note: Clean the filter in the filler cap with isopopyl alcohol. Dry thoroughly before replacing.

2. Processor section maintenance (Weekly)

    ❑ - Remove Activator and Stabilizer racks. Clean racks, and guides with warm, soapy water. Do not use alcohol or solvents. Clean any splashed chemistry from processor and dryer area. Inspect racks for worn or damaged components (gears) and replace as necessary.

    ❑ - At 4,000 plates or 4 weeks, whichever comes first, completely drain Activator and Stabilizer tanks and clean tanks and racks. Refill with fresh chemistry.

    Note: Replenishment rates are to be set to Printware recommendations. See "Setting Replenishment Rates" in the Installation Guide.

    ❑ - Check the temperature of the Activator bath (86^{o} F $\pm$ 2)

3. Semi-annual Preventive Maintenance

    ❑ - Performed by Printware authorized service technician.
    Includes check and adjustment/replacement as necessary of sensors and belts, all bearings, gears, rollers and clutches, pumps, blowers, motors, O-rings, heater temperatures, marker focus, calibration, etc.

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Procedures to Raise and Lower the Marker

Open the imager top cover and raise the marker by pulling marker lever up until lever stops. Lift up marker gently. Lower marker by gently lowering the marker and lock by pushing marker lever down until lever is horizontal. (See Figure S2-1)

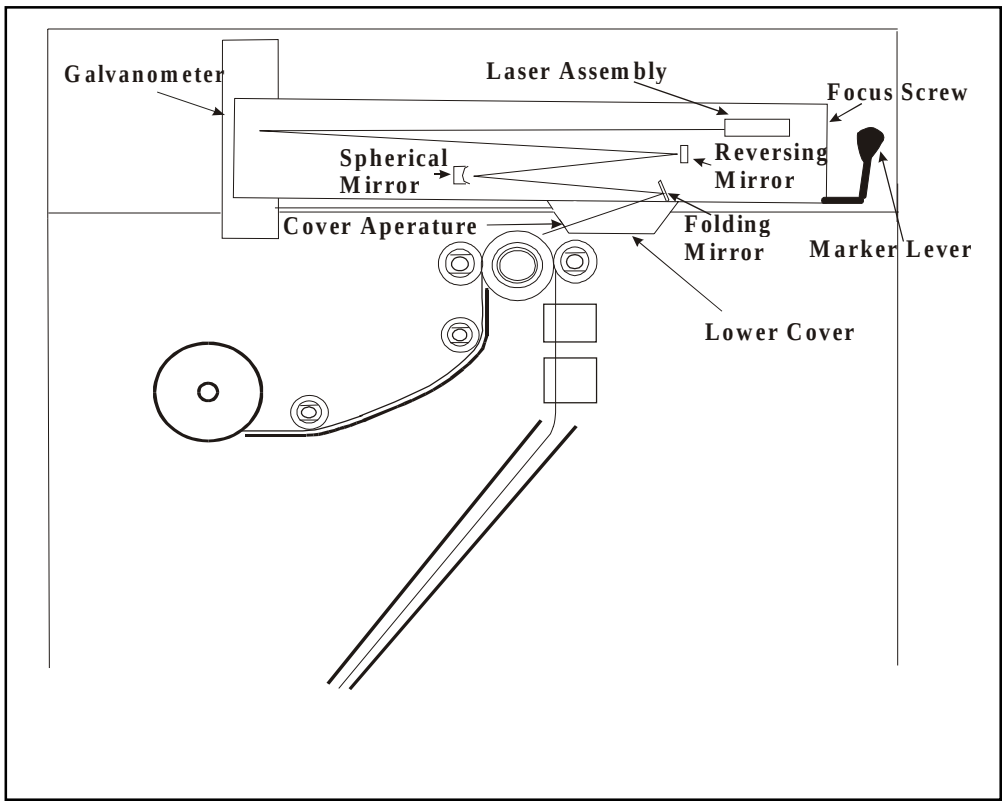

Figure S2-1 Side View of the Marker

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Inspecting and Cleaning Marker Assembly Unit Mirrors

CAUTION! Marker Assembly mirrors should be inspected and cleaned only if absolutely necessary. The marker unit mirrors have a sensitive surface coating and are easily scratched. Once a mirror is scratched, it is ruined and the entire Marker assembly unit must be returned to Printware for mirror replacement and realignment.

Overview

Under certain conditions, it may be necessary to inspect and clean the Marker assembly mirrors. Carefully check the condition of the marker. Clean only when necessary. Normally, only the folding mirror (the mirror visible through the aperture) requires cleaning. The laser beam is focused down to a small point when it strikes this mirror and is therefore susceptible to interference from dust or other surface dirt.

Procedures to Determine if the Mirrors Need Cleaning

Ensure that all Platesetter Recommended Periodic Maintenance has been performed.

Examine the Platesetter output. The most likely indications of dirty mirrors are vertical streaks of lighter color than the surrounding area. They could be of varying widths and could be vertical lines with fuzzy edges.

Turn off the Platesetter. Open the top cover and raise the marker assembly. Inspect the folding mirror through the marker assembly cover aperture using a flashlight. See Figure S2-1. Examine the mirror for dust.

Cleaning the Folding Mirror Using Compressed Air

CAUTION: Do not remove the Marker Cover at this time. Do not touch the mirror surface with your fingers! Perform this procedure only if:

a.) Dust particles can be seen on the Folding Mirror - or -
b.) Printed plates have silver vertical streaks or vertical lines with fuzzy edges.

1. Hold the compressed air canister upright and direct the nozzle or extension tube toward the mirror surface. Do not touch the mirror surface with the extension tube.

2. Gently blow the dust away. Short, quick blasts of air are more effective than continuous spraying.

Main Menu

Getting authorization to remove the Marker Lower Cover

On the marker lower cover are two seals which read “Warranty Void If Seal Broken.” Refer to Figure S2-1.

In situations where the marker is under warranty , the warranty will be void if the marker lower cover is removed without prior authorization. Only Printware authorized technicians may remove the Marker lower cover after receiving authorization from Printware Technical Support.

To obtain authorization to remove the lower cover, contact Printware Technical Support by telephone or FAX message:

Toll-free (U.S.A. only): 1-800-456-1400
FAX Number: (612) 454-3684

Be prepared to provide Technical Support with the following information:

Customer name
Platesetter serial number
Marker serial number
Description of print quality problems you are having
Description of Folding Mirror surface cleanliness
Steps you have taken
Request to remove Marker lower cover to inspect and possibly clean the other mirrors.

If appropriate, Technical Support will authorize you, by telephone or FAX message, to remove the marker assembly unit lower cover to examine the other mirrors and to clean these mirrors if necessary. Technical Support may also offer suggestions to correct the print quality problem, other than mirror cleaning.

Main Menu

Inspecting the Galvanometer Window, Reversing Mirror, Spherical Mirror, and the Folding MIrror

Get authorization to remove the marker lower cover. See the previous procedure.

Open the top cover and raise the marker. Remove the marker lower cover by unscrewing the 4 Allen head screws with flat washers located underneath the marker. Refer to Figure S2-1. This will break the "warranty void" seals.

Inspect the surfaces of the galvanometer window, the reversing mirror, the spherical mirror and the folding mirror. Refer to Figure S2-1.

If no dust particles or other particles are present on the mirror surfaces, reinstall the marker assembly unit lower cover. If this is the case, the cause of the plate quality problem is not mirror cleanliness.

If dust particles or other particles are present on the mirror surfaces, then perform the following procedures.

CAUTION: Do not touch the mirror surfaces with your fingers! Perform this procedures only if:
a.) Dust particles can be seen on the mirror surfaces.
b.) Printed plates have silver vertical streaks or vertical lines with fuzzy edges.

Cleaning the Galvanometer Window, Reversing Mirror, and Spherical Mirror Using Compressed Air.

1. Hold the compressed air canister upright and direct the nozzle or extension tube toward any mirror surfaces that appear dusty. Do not touch any mirror surfaces with the extension tube.

2. Gently blow the dust away. Short, quick blasts of air are more effective than continuous spraying.

CAUTION: The Reversing Mirror has the most fragile surface. Its surface is preferrably cleaned only with compressed air. Even gentle rubbing using a soft tissue may destroy its surface-coating. Perform this procedure only if:

1) Dust particles can not be removed from compressed air (see above procedure).
2) Spots can be seen on the mirror.
3) Plates have silver vertical streaks or vertical lines with fuzzy edges.

Main Menu

Cleaning the Galvanometer Window, Reversing Mirror, and Spherical Mirror and Folding Mirror if Compressed Air Does Not Remove the Particles/Spots

1. Soak a clean piece of webril wipes with acetone and very carefully and gently wipe the mirror surfaces that have particles attached to them. Be sure that only the webril wipes comes in contact with mirror surface. Wipe the mirror with a steady slow pace in one direction. Use the same method on the galvanometer window.
Do not clean mirror surfaces or the galvanometer window surface unnecessarily. If a surface is clean, leave it alone. The mirrors and the galvanometer window have thin, fragile surface-coatings that can be very easily rubbed off. Once the surface is rubbed off, the mirror is ruined and the entire marker assembly will have to be returned to Printware for repair.
If spots other than dust particles are present, apply only enough pressure to remove these spots. It is better to “under-clean” than to “over-clean” a mirror surface. If the tissue becomes dirty, use a new piece of tissue soaked with acetone.
2. Examine each surface with a flashlight to ensure that the entire surface is clean.
3. Reinstall the Marker lower cover. Do not operate the Platesetter with the lower cover removed. Lower the marker and close the top cover. Print plates to determine if print quality has improved.

Marker Focus adjustment Procedure

1. At 2400 DPI, image a 12" long, "4 pixel on focus" test plate from the control panel Test Plate Menu.

2. Inspect the plate (under an eye loop - **at least** 15 power). Observe the cross hairs. Note that there are 2 patterns - one is the negative of the other.

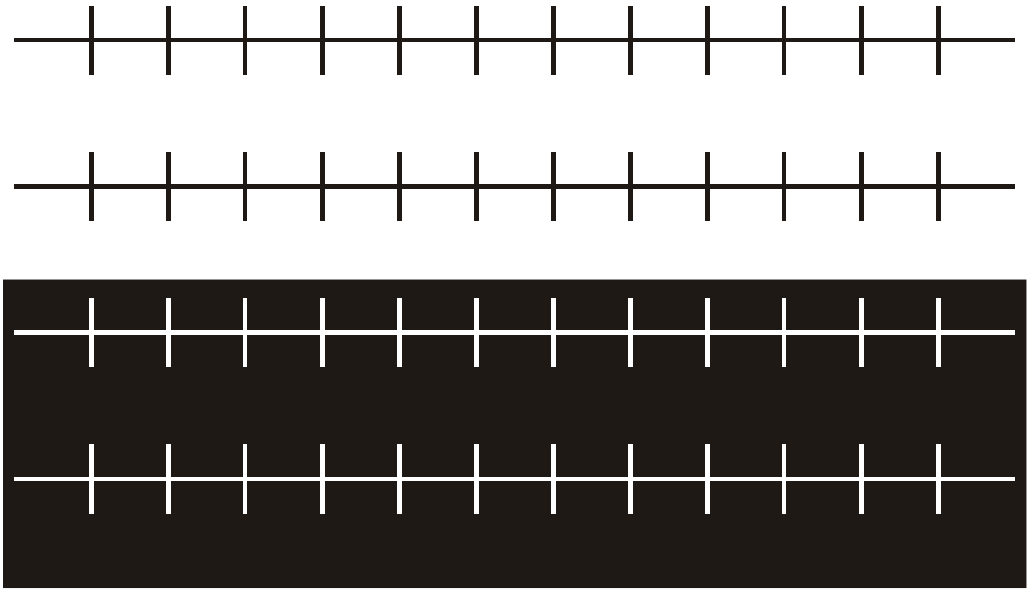
3. Open the top imager's top cover and adjust the marker focus screw using a 7/32" allen wrench. Turn the focus screw 3 full turns clockwise (see Figure S2-1). Close the top cover. Run another "4 pixel on focus" test plate.

4. Compare to previous plate. If the focus pattern looks better, you are turning the focus screw in the right direction. Continue turning the focus screw 2 full turns at a time and re-imaging another focus pattern and observe the results again.

5. If the pattern looks worse, turn the focus screw 6 full turns CCW, close the cover and run another focus pattern.

6. Repeat whatever parts of steps 3, 4, & 5 that are necessary until test plates are in focus. Note that there is approximately an 8 to 10 turn range on the focus screw where the marker is in focus. The best focus will be obtained in the middle of that range.

Main Menu



Note the sharp, clean, **focused** pattern above - vertical and horizontal lines approximately the same width and are full and sharp in both the positive and negative modes.

4 pixel on focus patterns

Note the fuzzy, **un-focused** pattern below - vertical and horizontal lines are fuzzy and may not be the same width.

Main Menu

Processor Section

Operation

Safeguards

1. Do not spill liquids into the electrical compartment or on other electrical components. Do not operate the processor if electrical components have been damaged.

2. Disconnect electrical power before servicing the processor.

3. Before handling photographic chemicals, read the manufacturer's handling procedures including the material safety data sheets. Chemicals used in processing are hazardous if handled carelessly.

Systems

Transport: When the leading edge of the plate exits the imager, the processor transport system also starts. Opposed rollers, guides and belts will move the media through the activator and stabilizer racks, dryer and into the receiver tray.

Heating: The solution in the activator tank is heated by a blanket heater attached to the underside of the tank. The heater energizes when power is applied to the processor providing that there is solution in contact with the working-tank level sensor. The solution temperature is maintained by a working-tank temperature sensor. Over-temperature protection is provided for by means of a thermostat in the blanket heater. The dryer heater energizes when imaging starts and de-energizes a few seconds after the last plate falls into the receiver. The dryer temperature is maintained at the set point by means of a sensor in the dryer chamber. Over-temperature protection is provided for by a thermostat in the heater assembly.

Replenishing: Replenishment occurs when the media is depressing the switch in the dryer. The media travels at 37 inches/minute (94 cm /minute) and the pump can be adjusted to replenish a certain amount for each plate. There is a 10-turn adjustment screw on each pump; turn clockwise to increase the flow rate. Sensors are in the replenishment tank (see figure S2-2).

Main Menu

NOTE: If the effluent tank accessory is being used, and the tank is full, the replenisher pumps will not run.

Controls

Prime Pump On the control panel Run Hardware Menu: Used to activate the pumps. They will run for 5 minutes and then stop.

Reset: Used to clear all systems and prepare the processor section for a new job.

Quarterly Maintenance:

1. Open the top cover. (See Figure S2-3 and S2-4). Inspect all gears and bearings for wear.

2. Make sure that the dryer drive belt is tight. If the dryer belt is jumping, loose, or is sagging it can be tightened by adjusting the bracket on the side rail. Loosen the two screws in the bracket and move towards the solution racks to snug up the drive belt. Tighten the two screws.

3. Make sure that the dryer drive clutch is not slipping or the dryer rollers are rotating slower than the solution rack. Tighten the dryer clutch by turning the nut at the end of the shaft clockwise.

4. Check to see that there is a slight (0.01" to 0.03"; 0.03 to 0.08 cm) end play in the rack rollers. To adjust for this play loosen the set screws in the gears, moving the gears on the roller shafts and tighten set screws.

5. Check the dryer belts for wear or cracks.

6. If there is excessive vibration, check for damaged motor mounts.

7. Check to see that rack gears are properly seated into the drive shaft worm gear. The teeth should be engaged at least half way but not be bottoming out. The drive shaft can be adjusted by loosening the bearing block screws at each end, adjusting the shaft position and tighten block screws.

8. Check and tighten hose clamps.

9. Check drain and replenishment line for restrictions.

10. The drive motor, replenisher pump motor and the blower motor do not need to be lubricated.

Main Menu

11. Drive motor assembly removal. Remove the wire tray located on the right side of the Platesetter. Remove the Platesetter right panel. Remove drive motor by unscrewing the three screws holding the drive motor plate to the chassis. Disconnect the 2 drive motor leads and unfasten the motor ground wire. Take the drive belt off of the drive shaft by rotating the shaft and deflecting the belt off of the pulley.

12. Check to verify that the solution is 86°F (30°C) nominal activator temperature. The activator temperature can be changed by adjusting a potentiometer (R42) on the PC board. Turning the screw clockwise increases the temperature, if the potentiometer is blue. Turning the screw counterclockwise increases the temperature if the potentiometer is grey.

13. Check to verify that the dryer temperature is 110°F (43°C) nominal. The dryer temperature can be changed by adjusting a potentiometer (R43) on the PC board. Turning the screw clockwise increases the temperature, if the potentiometer is blue. Turning the screw counterclockwise increases the temperature if the potentiometer is grey.

14. Printed circuit board removal. Remove the wire tray located on the right side of the Platesetter. Remove the Platesetter right panel. Disconnect all the connectors. There are nine quarter-turn plastic standoff screws that hold the board on the printed circuit board bracket. Rotate these screws 1/4 turn to free the board.

15. Dryer heater-element removal. Remove the wire tray located on the right side of the Platesetter. Remove the Platesetter right panel. Remove the blower and mounting bracket. There are 4 rubber isolators used to mount this assembly. Remove the vertical cover panel that forms a part of the dryer plenum. The heater is mounted on the inside of this cover.

Main Menu

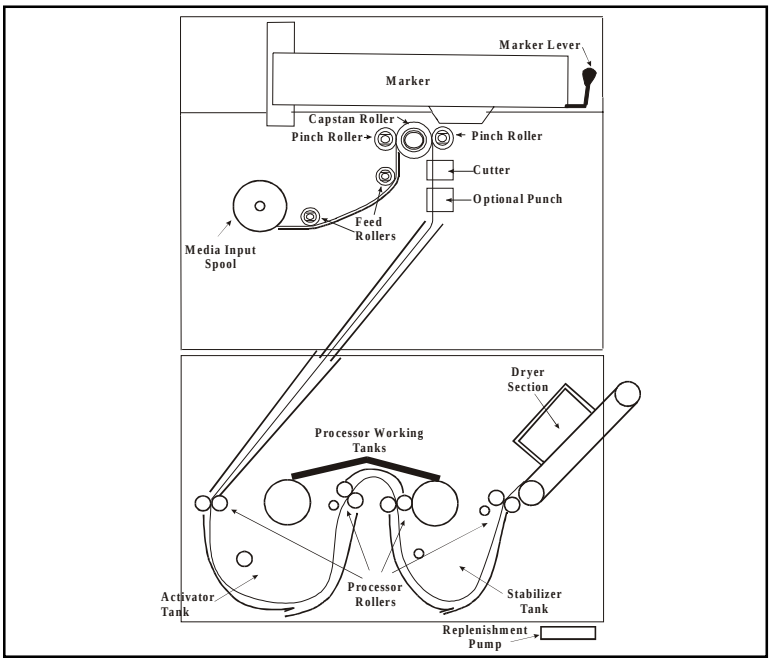


Figure S2-2 Location of Platesetter Rollers and Replenishment Pump

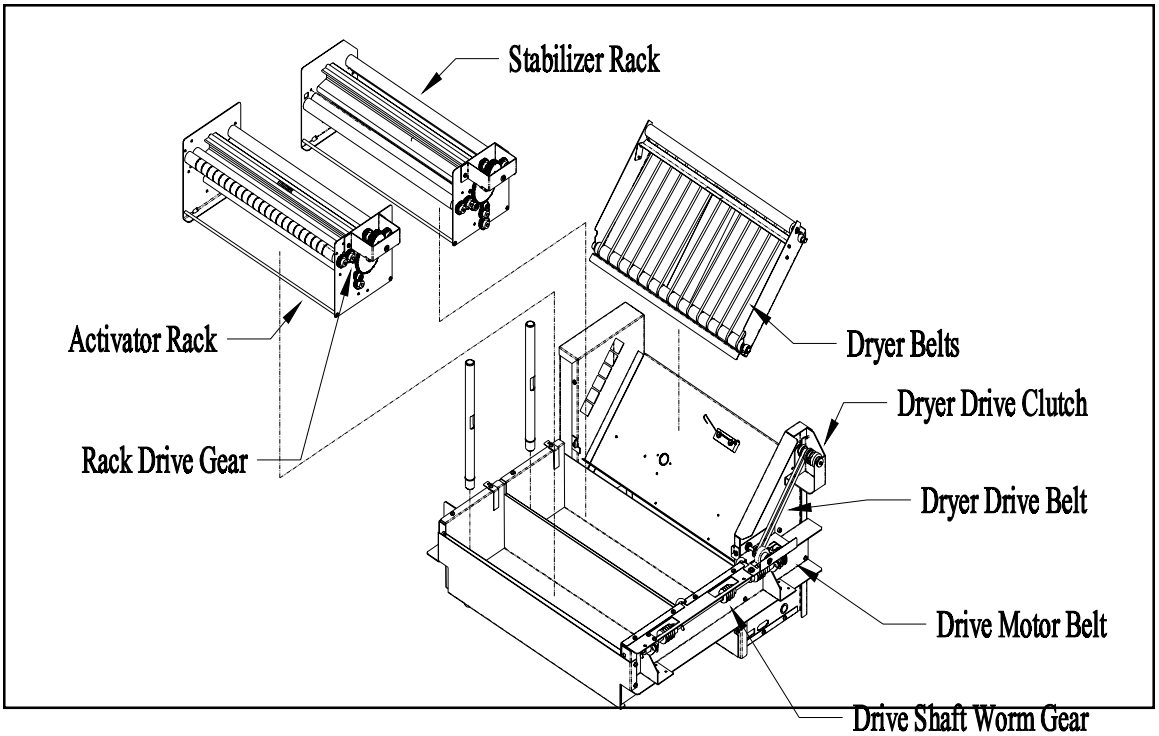


Figure S2-3 View of the Processor

Main Menu

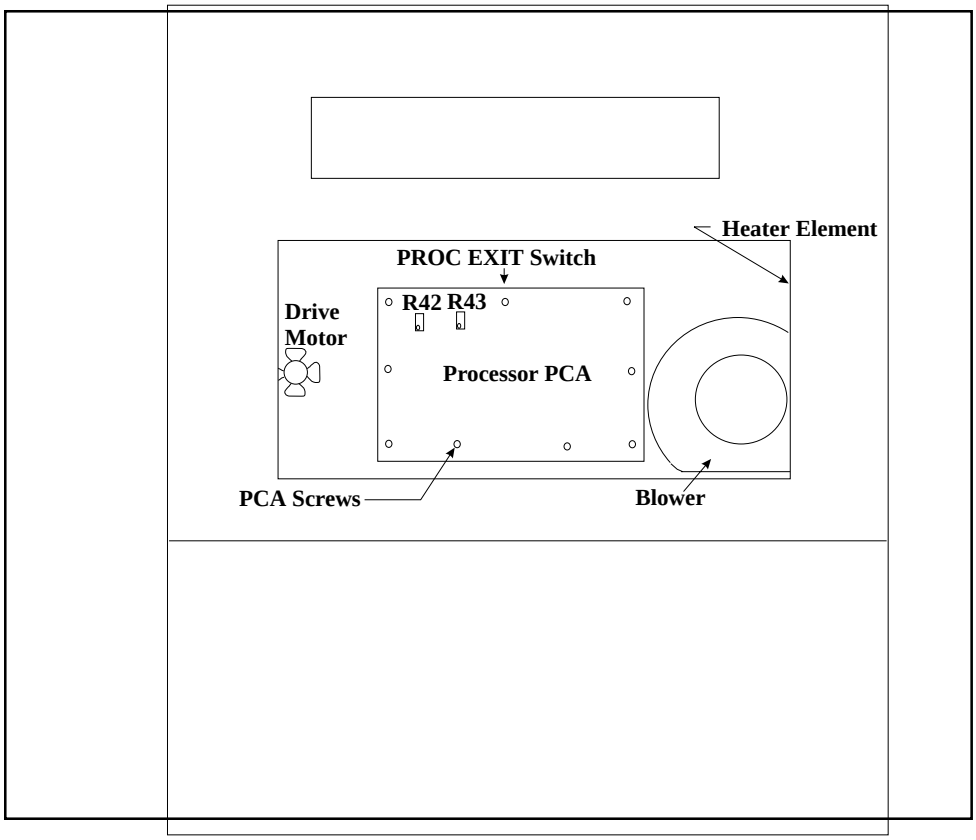


Figure S2-4 Right Side View of the PlateStream Platesetter

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Main Menu

CHAPTER 3

COMPONENT REPAIR AND REPLACEMENT

Replacing Rollers, Belts, Motors, and Cutter

Overview

This section provides the procedures for removing and reinstalling the following 20 rollers (see Figure S2-2).

- Feed rollers
- Two pinch rollers (left and right)
- One capstan roller
- Twelve processor rollers

NOTES:

1) When removing rollers, label all spacers in terms of front or rear if any, and which roller they were used with. For the Platesetter to function correctly, all spacers must be placed back in their original positions.

2) When replacing rollers, note that the new roller shaft may not be precisely the same length as the old roller shaft. Install the spacer(s) on the rear of the shaft with the required thickness to eliminate any front to rear play. Spacers are available in four thicknesses:

0.016″ (0.4 mm nominal) Part # 900254-006 Spacer, Inner Shaft, 3/8 ID x.016 Th
0.048″ (1.2 mm nominal) Part # 900359 Spacer, .375 ID x .047 Th
0.063″ (1.6 mm nominal) Part # 900254-003 Spacer, Inner Shaft, .0630.,065 Th
0.092″ (2.3 mm nominal) Part # 900359-001 Spacer, .375 ID x .093 Th

Main Menu

Replacing the Feed Rollers, (See Figure S2-2).

1. Open the top cover and raise the marker assembly. Remove media if present.

2. Remove both snap rings from end of the rollers.

3. Slide the roller toward the rear of the platesetter and remove.

4. Install the new rollers in reverse order.

Removing the Pinch Rollers (Left and Right) (See Figure S2-2).

1. Open the top cover and raise the marker. Remove the front and rear panel.

2. Remove the E-clips, spacers (if any), and bushings from each end of the pinch roller shaft.

3. Remove the spring loaded tensioner from each end of the roller shaft by removing the hex nut.

4. Access the shutter from the top of the Platesetter. Loosen the four screws on the shutter to access the roller. Remove the roller by sliding the roller towards the rear of the frame until it clears the frame.

5. Install the new roller in reverse order. Lower marker assembly and close the top cover.

Main Menu

Removing the Capstan roller and Capstan Drive Assembly (See Figure S2-2, S3-1)

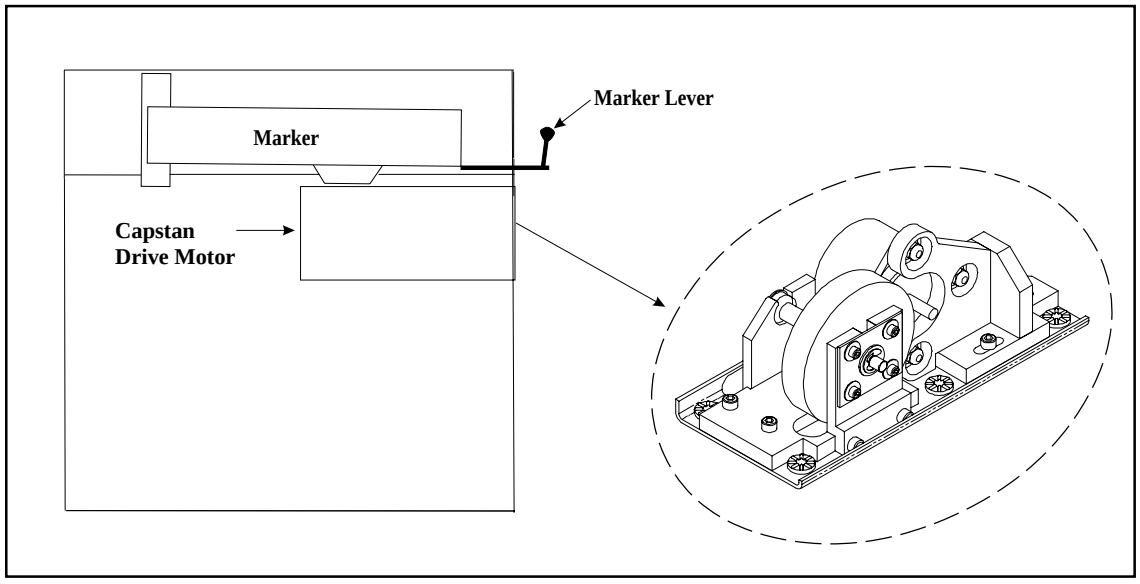

Figure S3-1. Location of the Capstan Drive Motor

1. Open the top cover and raise the marker. Remove the front and rear panels.

2. Remove the pinch rollers. Refer to the previous procedure.

3. Access the capstan drive assembly from the front of the Platesetter. Disconnect the cable from the capstan drive assembly. Remove the capstan drive assembly by removing the three screws holding the bracket. Slide the belts off of the capstan roller. These screws are located underneath the capstan drive assembly.

Main Menu

4. To replace the belts, remove the E clip and bearing from the capstan drive assembly. Install the new belts in reverse order.

5. To replace the motor, remove the three screws holding the motor. Install in reverse order.

6. To replace the capstan roller, remove the shutter assembly (located above the capstan roller) by removing four screws, two on each side attached to the Imager, and removing two shoulder screws located on solenoid underneath the shutter assembly. Remove the following parts from the rear end of the Capstan roller shaft:

- Traction control pulley
- Traction control belt
- Jam nut
- 2 wave washers
- spacer
- roller bearing
- bearing clip (removing two hex nuts)

Remove the following parts from the front end of the capstan roller shaft.

- pulley (removing Allen screw)
- bearing clip (removing two hex nuts)

Access the Capstan roller from the top of the Platesetter. Remove the five E-clips. Remove the roller by sliding the capstan roller toward the front of the frame until the rear of the roller shaft clears the frame. Install the new Capstan roller in reverse order. Lower the marker and close the top cover. Replace the front and rear panels.

Main Menu

Cutter Assembly

Construction of the Cutter Assembly (See Figure S3-1).

The cutter assembly consists of a frame, DC motor, and position sensor.

1. Open the top cover and raise the marker.

2. Disconnect the cutter cable assembly.

3. Loosen (do not remove) the 2 op side allen screws and remove the 2 non-op side screws.

4. Access the cutter assembly from the top of the Platesetter and remove the cutter by sliding the cutter towards the rear of the platesetter.

5. Install the new cutter in reverse order. Lower the marker and close the top cover.

Replacing the Processor Rollers (See Figure S2-2, S2-3).

There are thirteen rollers, six in the activator rack and seven in the stabilizer rack.

1. Open the top cover.

2. Remove Cover E. Remove Guide F by pressing guide towards the rear of the Platesetter, lift guide from the front of the Platesetter and remove. Remove Guide D by pressing the guide towards the front of the Platesetter, lift the guide from the back of the Platesetter and remove.

3. Remove the rack from the Platesetter.

4. Remove the gear from roller by loosening one set screw. Remove the spring (if any) and the bearing (if any).

5. Remove the roller by sliding the roller towards the front of the rack until it clears the frame.

6. Install the new roller in reverse order. Close the top cover.

Main Menu

Replacing the Marker Unit

CAUTION: The Marker Housing contains potentially harmful invisible laser energy. Do not attempt to open the inner covers, other than described in this manual.

Construction and Function of the Marker Assembly Unit

The marker assembly unit consists of a frame, top cover, lower cover, laser/lens assembly, galvanometer, reversing mirror, spherical mirror, folding mirror, SOS sensor, and SOT sensor. The laser diode produces red or infrared light and is highly sensitive to ESD damage. The galvanometer resonates at 540 Hz in a sealed vacuum chamber.

The marker assembly unit is mounted in an outer frame, which is attached by two hinge assemblies to the Imager section chassis. The controller PCA is mounted on the top of the marker assembly unit.

There is a lithium battery backup RAM on the controller printed circuit board (U178 on 522980-XXX), located on the top of the assembly. This RAM/lithium battery is not field replaceable.

Refer to the PlateStream Platesetter Installation Guide for the installation of a new marker. When a new marker assembly unit is installed in a Platesetter, the new marker assembly unit calibration settings must be stored in the non-volatile SRAM memory by the controller PCA. This section describes the calibration-setting storing procedures.

Recalibrating the Marker/Controller PCA

At the main menu press **'4'** to access the More Information menu. Press **'2'** to access the Calibrate menu. Press **'2'** to calibrate Marker.

The control panel will display "are you sure?" Pressing *ESC* exists this menu without changing the marker calibration. Pressing *ENTER* will cause the control panel to display "Power Cycle," which means to turn the machine off then back on.

Main Menu

CHAPTER 4

REPLACING ELECTRONIC COMPONENTS

Introduction

Signals output by the RIP are received by the controller PCA, mounted on top of the marker. Instructions and acknowledgments are acted on accordingly. The controller PCA controls power to the laser and drive current sent to the galvanometer.

The data signals sent to the controller PCA cause the circuitry to turn the laser on and off, while the galvanometer sweeps the laser light back and forth across the plate surface, to selectively expose portions of the plate material passing under the aperture.

The engine stepper PCA precisely controls the timing of drive signals sent to the various motors within the Imager section to coordinate the feeding, imaging, and cutting of the plate material.

The control panel PCA accepts signals from the interface PCA, controller PCA, and from the human operator (via the keys on the control panel) to control and report Platesetter functions and conditions. There are four PCAs and one power supply assembly within the imager half of the Platesetter. These are:

•Controller PCA
•Interface PCA
•Engine Stepper PCA
•Power Supply Assembly

This chapter provides the following information for each PCA:

•location
•voltages

•connector and pin assignments
•replacement instructions

This chapter also includes information about the sensors.

Main Menu

NOTE:
There are no procedures for replacing the SOS and SOT sensors. The SOS and SOT sensors are part of the marker assembly, and are not replaced separately.

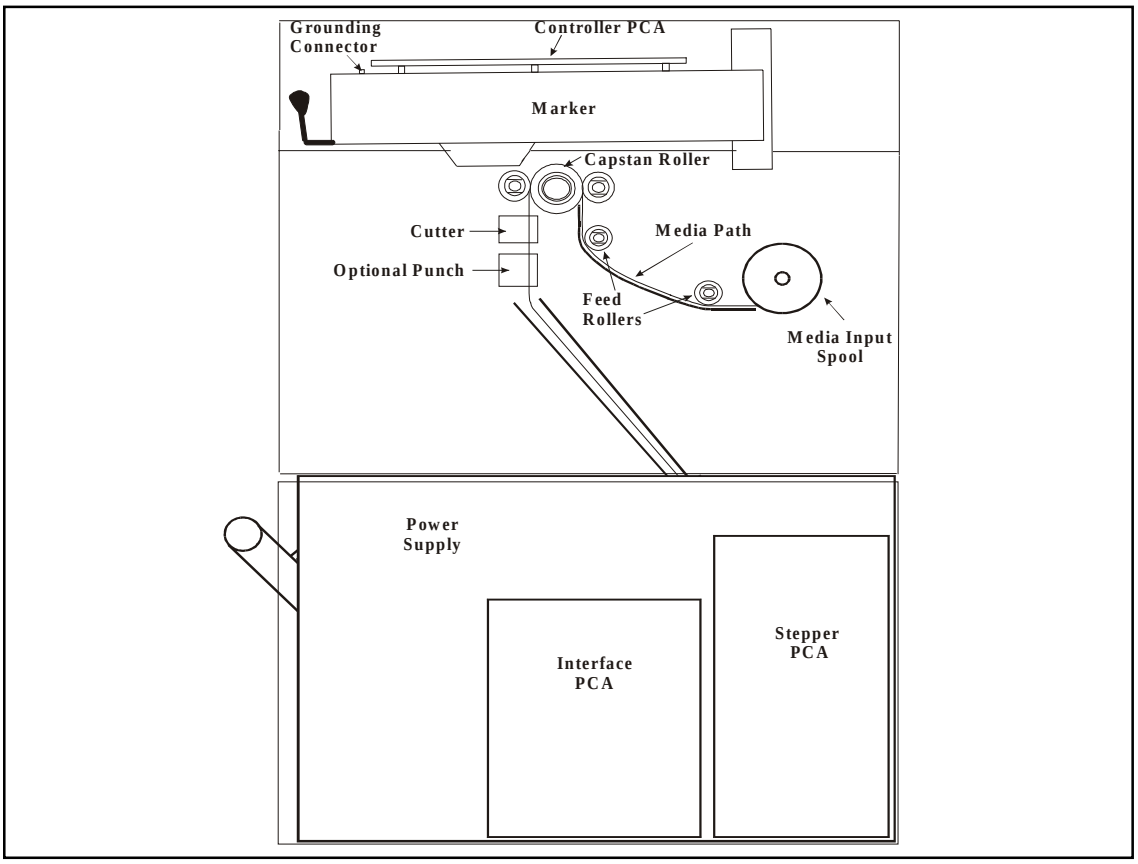

Figure S4-1. Location of the PCAs (viewed from back of imager)

Controller PCA

Location and Function

The controller PCA is attached to the top of the marker (See Figure S4-1). Controller PCA electronics perform the following functions:

•control data transmission from RIP to Platesetter
•control laser intensity

Main Menu

•control laser data rate
•monitor all sensors
•control galvo
•control motors

The non-volatile SRAM memory of the controller PCA stores the total plate count, the image quality settings (specified using the Manual Setup menu on the control panel) for both polyester and paper plate material, the image position settings, and the calibration settings.

Voltages Supplied to Controller PCA

+5 VDC (to power all integrated logic chips)
+24 VDC
+12 VDC
-12 VDC

Connector Assignments

J1 Laser power and control
J2 Not used
J3 To RIP
J5 Not used
J6 Power
J7 Laser safety interlock switch
J8 Imager/RIP Interface
J9 Interface PCA/control panel communication cable
J11 SOS/SOT sensors
J14 Galvanometer control
J15 Not Used
Spare Not Used

Main Menu

Replacing the Controller PCA

The non-volatile SRAM on the controller PCA stores the total plate count, image quality settings, image position settings, and marker assembly calibration values. All of this information will be lost when the controller PCA is replaced. If possible, look through all the menus on the control panel before replacing the controller PCA and write down all the settings. Image quality and position settings can be re-entered from the control panel after the PCA is replaced. The plate count and material used count will start over from zero, so keep a record of the values read from the old controller PCA with the Platesetter. The marker assembly calibration values will be regenerated during the marker assembly calibration procedure. If the image settings and plate count values cannot be read (due to a massive controller PCA failure), use the information from the customer's operator log for resetting these values.

Before beginning the replacement procedure, record the following information (punch values are applicable only if this option is installed):

	Resolution
	2400
Cut Length	_____
Overlap Length	_____
Backup Length (Punch off)	_____
Backup Length (Punch on)	_____
Punch Length (Punch on)	_____
Miniplate Backup Length	_____
Image Power (Processor & Mini Plate)	_____
MT Speed	_____

1. Turn off the Platesetter and open the top cover.

2. Replace the controller PCA as follows:

Main Menu

CAUTION! Follow ESD-protective procedures carefully. Refer to page 1-1 if necessary.

a) Remove the gold shield by unscrewing four screws and washers.

b) Disconnect J1 (the laser diode connector) first, and immediately connect the cable to the brown grounding connector located underneath the PCA on the right side of the marker assembly frame. See Figure S4-1. This prevents damage to the highly sensitive laser diode.

c) Disconnect all cables from the controller PCA. Note the correct orientation of each cable.

d) Unscrew the four standoffs holding the controller PCA. Carefully remove the controller PCA from the top of the marker assembly by squeezing the five plastic standoffs holding the controller PCA.

Note: Always transport and store PCAs in anti-static bags.

3. Install the new PCA in reverse order.

4. Recalibrate the marker assembly/controller PCA as follows:

At the main menu move the cursor to position “4” or simply press 4 to access the More Information menu. Once inside this menu move the cursor to “2” or simply press 2 to access the Calibrate menu. In this menu move the cursor to “3” or simply press 3 to access the Calibrate Marker assembly menu. The control panel will display “are you sure”. Pressing ESC exits this menu without changing the marker assembly calibration. Pressing ENTER will cause the control panel to display “Power Cycle” which means to turn the machine off and then back on.

5. Close the top cover.

Interface PCA

Location and Function

The interface PCA is located next to the power supply in the back of the machine. See Figure S4-1.

The interface PCA is the interface between the controller PCA and the Platesetter engine assemblies. The interface PCA also receives the signals from the various sensors within the Platesetter. The interface PCA also sends control signals to the engine stepper PCA to activate the stepper motors.

Main Menu

Voltages Supplied to Interface PCA

+12 VDC
-12 VDC
+5 VDC
+24 VDC

Connector Assignments

J1 Not used
J2 Marker cooling fan
J3 Punch control (option)
J4 Not used
J5 Shutter solenoid
J6 Not used
J11 Engine stepper PCA
J12 Controller PCA/control panel communication cable
J13 Not used
J14 Processor communication cable
J15 Sensors
J16 Power Supply

Main Menu

Replacing the Interface PCA

1. Turn off the Platesetter and remove the front panel.

2. Replace the interface PCA as follows:

   a) Access the interface PCA from the rear of the Platesetter.

   b) Disconnect all cables. Note the correct orientation of each cable.

   c) Carefully remove the interface PCA by unscrewing the 4 standoffs which attach the interface PCA to the power supply.

   d) Install the new interface PCA in reverse order. Replace the rear panel.

Engine Stepper PCA

Location

The engine stepper PCA is located next to the power supply in the back of the machine (see Figure S4-1).

The engine stepper PCA provides power and control signals to the capstan motor and cutter motor.

Voltages Supplied to the Engine Stepper PCA

+24 VDC (stepper motor power)
+5 VDC (signal logic)

Main Menu

Connector Assignments

J1 Not used
J2 Not used
J3 Not used
J4 Capstan drive
J5 Power (in from power supply drawer)
J6 Not Used
J7 Interface PCA
J8 Cutter assembly

Replacing the Engine Stepper PCA

1. Turn off the Platesetter.

2. Remove the rear panel.

3. Access the Engine Stepper PCA from the rear of the Platesetter. Disconnect the cables from the engine stepper PCA. Note the correct orientation of each cable.

4. Carefully remove the Engine Stepper PCA by removing the 4 nuts securing the engine stepper PCA to the power supply.

5. Install the new PCA in reverse order. Replace rear panel.

Main Menu

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Main Menu

Power Supply Assembly

Location

The Power Supply assembly is located in the back of Imager behind the processor section. (See Figure S4-1). The power supply provides all DC and AC power within the Platesetter. The circuit breaker prevents high current from damaging the Platesetter electronics.

Components

The power supply contains a PCA which is responsible for distributing the correct signals within the Platesetter. The connectors and other items on the external portion of the power supply drawer are described below.

- Power on/off switch / ckt breaker (20 amp)
- Connector J1 engine stepper PCA
- Connector J2 not used
- Connector J3 not used
- Connector J4 controller PCA
- Connector J5 interface PCA

Replacing the Power Supply Module

1. Turn the Platesetter off and unplug. Remove the rear panel.

2. Disconnect the cables from the power supply. Note the orientation of each cable. Disconnect the power connections for the processor. These connections are located in the processor PCA bay on the terminal strip labeled TS1, connection blocks 1, 2, and 3.

3. Remove the 6-3/8" nuts which attach the power supply assembly to the platesetter chassis. These nuts are located inside the platesetter on the rear panel.

4. Remove the power supply assembly from the platesetter chasis.

5. Install the new power supply in reverse order. Replace the rear panel.

Main Menu

Sensors

The sensor Status menu indicates the current digital status of all Platesetter sensors. Explanation of all the sensor indications are shown below.

NO MEDIA – Identifies the amount of media in the spool as okay or none. A **'0'** indicates that the media supply is empty, **'1'** indicates that the amount is sufficient.

GUIDE B – Indicates the presence of media at Guide B. A **'1'** indicates that media is present (*e.g.*, during imaging). A **'0'** indicates the sensor is clear. This is the normal idle condition.

WRKNG TANK LOW – This sensor monitors the solution level in the working tanks within the processor. A **'0'** indicates the current level is okay; a **'1'** indicates a low solution level in one or both of the tanks.

REPLN TANK LOW – This sensor monitors the solution level in the replenishment tanks underneath the processor. A **'0'** indicates the current level is okay; a **'1'** indicates a low solution level in one or both or the tanks.

EFL TANK HIGH – This sensor monitors the level of spent solution in the optional effluent tank underneath the processor. A **'0'** indicates the current level is okay, a **'1'** indicates the tank needs to be emptied.

PROC TEMP OK – The processor Activator temperature sensor monitors the temperature of the Activator bath. A **'0'** indicates that the current temperature is okay; a **'0'** indicates that the bath is still warming up, or that there is a problem with the heater.

PROC EXIT – Indicates the presence or absence of media at the processor exit sensor. A **'1'** indicates that media is present (*e.g.*, during imaging). A **'0'** indicates the sensor is clear. This is the normal operating condition.

Replacing the Imager Sensors (See Figure S4-2)

1. Remove the front panel.

2. Access sensors from the front of the Platesetter. Disconnect the three-pin connector from the sensor.

3. Remove the sensor by removing the two screws holding the sensor in place.

4. Install new sensor in reverse order. Replace the front panel and close top cover.

(NOTE: The PROC EXIT sensor is located above the processor PCA. See Figure S2-4)

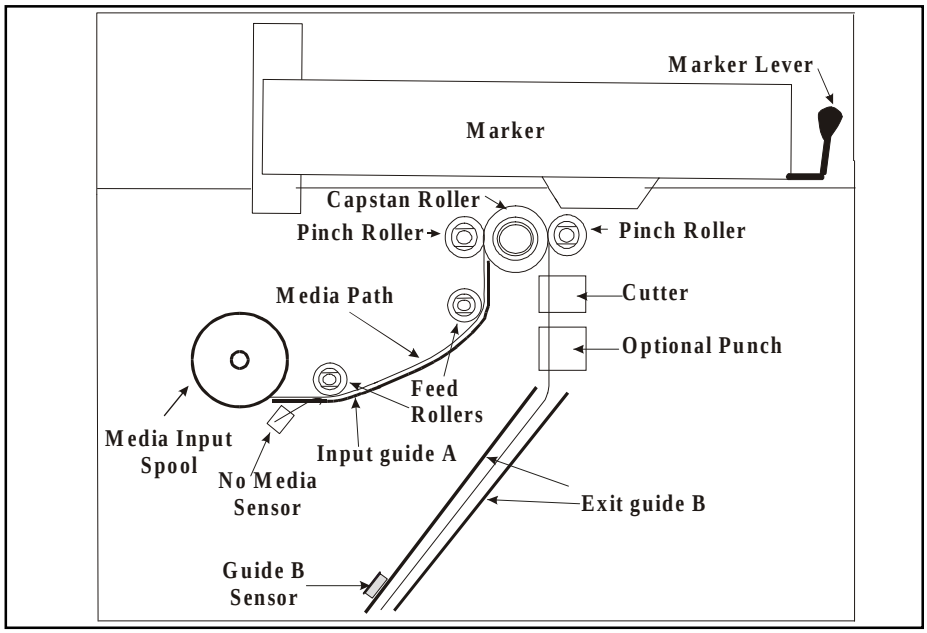

Figure S4-2 Front View of the Imager

Main Menu

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Main Menu

CHAPTER 5

TROUBLESHOOTING

Introduction

This chapter contains procedures for isolating and correcting Platesetter problems in the field.

CAUTION: *Operations with this symbol require advanced technical training.*

Main Menu

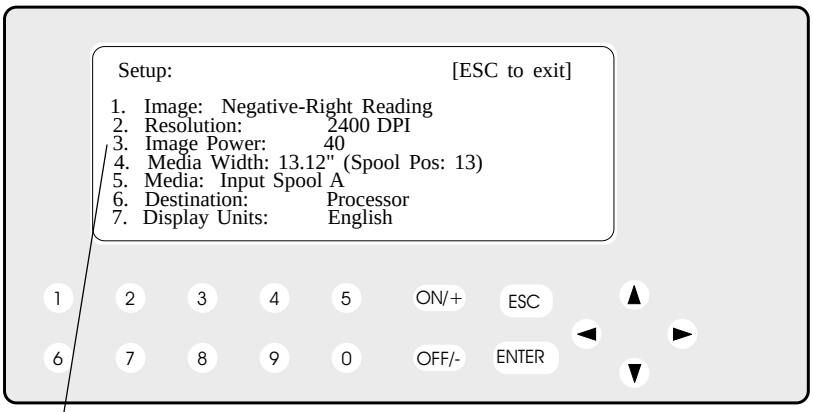
EXPOSURE PROBLEMS

Weak image (broken type or fine lines; pinholes in solids)

1. Verify that exposure is set correctly by checking D_{max} (see **Operator Guide** for details) . Laser power too high can cause text to break up on press output (not the plates).
2. Reduce laser power.

Plugged images or excessive background.

1. Verify that exposure is set correctly by checking D_{max}. Laser power too low can cause plugged images and excessive background on press output (not the plates).
2. Increase laser power.



Setting laser power (setup menu item #3)

Main Menu

EXPOSURE PROBLEMS (...cont.)

Uneven density from center to edges.

1. Calibrate densities.
2. Customized firmware can correct slightly uneven density profiles. Send several half-black/half-white sample plates (from the Operator Panel test plate menu) at the resolution of interest to Printware.
3. Refocus marker.

"Hazing" on fine print or fine lines.

1. Verify that exposure is set correctly by checking D_{max}.
2. Increase laser power
3. Turn laser fogging circuit up (turn potentiometer clockwise 60º or 10 minutes.)
   (Note original potentiometer position. If resetting does not alleviate problem, return to original position.)

Going "around in circles" adjusting laser power

1. Note that increasing laser power on plates increases density in black (non-image) areas, and decreases line thicknesses.
2. Use the following typical Operator Panel laser power settings as a "sanity check":

	Typical laser power setting	
	RED	**INFRARED**
2400 DPI	35-55%	20-30%

Main Menu

IMAGE QUALITY PROBLEMS/ARTIFACTS

Thin-line artifacts ("Scan lines")

1. Ensure laser exposure is set correctly.
2. Traction control (if installed) may be jumping. This causes irregular horizontal lines.
   2.1. Increase the belt tension by wrapping the spring around one additional turn.
   2.2. Temporarily disable traction control to see if this solves the problem.
3. Noisy capstan motor (causes high-frequency horizontal banding down the whole length of plate).
   3.1. Check capstan motor mounting.
   3.2. Replace capstan motor.
4. Noisy power supply fan (Artifact will be a constant frequency down the page).
   4.1. Check fan motor mounting.
   4.2. Replace power supply fan motor.
5. If unable to diagnose the problem, send two plate samples to Printware for analysis.

Vertical artifacts.

1. Wavy vertical lines throughout media or more severe on the non-operator side of plate, generally low-frequency (on the order of 10 artifacts per inch)--Usually a faulty galvanometer. Replace marker assembly.
2. Wavy, high-frequency (on the order of 100 artifacts per inch) vertical lines concentrated in the middle of the plate--Usually a faulty controller PCA.
3. Well-defined, straight vertical lines--Usually a faulty controller PCA.

Main Menu

IMAGE QUALITY PROBLEMS/ARTIFACTS (...cont.)

Fuzzy or Blurry Image

1. Clean processor and replace chemistry (see Operator Manual).
2. Inspect marker mirrors and clean if necessary (see Chapter 2).
3. Adjust laser focus (see Chapter 2).

White, black, or silver streaks

1. Set Density-Dot calibration (see Installation Guide)
2. Increase exposure (control panel setup menu.)
3. Inspect marker mirrors and clean if necessary (see Chapter 2).

Dirty silver-colored spots

Clean pinch rollers with D-Ink.

Main Menu

REGISTRATION AND SKEWING

Image length incorrect (too long or too short)

1. Run a Printware “Grid18” from the RIP. Check to be sure scaling in RIP is set at 100%. Then measure.
2. If source of problem is the platesetter, errors of less than .250 (6 mm) can be corrected with the Operator Panel length adjustment procedure (see Operator Guide).

Image width incorrect (too wide or too narrow)

1. Run a Printware “Grid18” from the RIP. Check to be sure scaling in RIP is set at 100%. Then measure.
2. If the source of problem is the platesetter, errors of less than 1/8" (3 mm) can be corrected by realigning the SOS and SOT sensors.

First plate after a load misregistered on process-color jobs

1. Check loading and guide positions.
2. Consider sending blank or test plates before color jobs to eliminate first-plate skew.

Main Menu

REGISTRATION AND SKEWING (...cont)

Tracking or skewing problems

1. Adjust roller-spring tensions.

(Tools required: tension gauge, pull gauge, or "fish scale").

1.1. Attach a 2"-wide (50 mm) strip of thin (0.004" or 0.005"; 0.1 mm) polyester media to the gauge. Slide the strip between the roller pair to be tested, and measure the force required to pull the media strip out of the roller pairs (force should be the same from side to side).

1.2. Adjust roller tensioner screws on either side of the roller pairs to set correct tension. Correct roller tensions are as follows:

- First pinch rollers: approx. 4-5 lbs. (20 N)
- Second pinch rollers: 8-14 lbs. (50 N)

(note: tensioner on operator side may look tighter due to the traction control on the back of this roller)

2. If unable to resolve the problem, send sample plates to Printware. (Send four maximum-width grid pattern plates. We can measure and advise on adjustments).

Main Menu

OPERATOR PANEL PROBLEMS

Operator Panel does not function.

1. The operator panel is an applet on the RIP. Check that both the RIP and the Platesetter are plugged in and turned on.

2. Check the cable connections between the RIP and the Platesetter.

Note: The machine is designed to beep continuously every 5 seconds if a job is sent with an unsupported resolution.

MARKER/GALVANOMETER PROBLEMS

For all galvanometer errors, recycle the platesetter to clear spurious errors. If errors persist, use the following steps before replacing the marker assembly.

Galvo initialization stops at:

00	1. Check cables between controller PCA and marker assembly. 2. Check controller PCA and power supply voltages. - Check voltages at power supply. - Check fuses and replace if necessary. - Replace Power Supply if necessary. 3. Calibrate the marker. 4. Replace the controller PCA. 5. Replace marker assembly.
02	1. Check galvo connector (J14) on the controller PCA. 2. Check voltage across R267 or R266 on the controller PCA. 3. Calibrate marker. 4. Replace controller PCA.
03	1. Check galvo connector (J14) on the controller PCA. 2. Calibrate the marker. 3. Replace the controller PCA.
05	1. Check the laser diode (J1) and the safety interlock (J7) connectors on the controller PCA. 2. Calibrate the marker. 3. Replace the controller PCA.
07	1. Check SOS/SOT connectors on the controller PCA. 2. Check SOT sensor alignment. 3. Calibrate the marker. 4. Replace controller PCA. 5. Replace marker assembly.
10	1. Calibrate the marker. 2. Replace the controller PCA.

MARKER/GALVANOMETER PROBLEMS (...cont.)

"Marker hold" error message

1. Turn up fogging circuit, clockwise, ¼ turn maximum. (Note original potentiometer position. If resetting does not alleviate problem, return to original position.)
2. Realign SOS and SOT sensors
   - Turn SOS screw 1 full turn clockwise.
   - Turn SOT screw 1 full turn counterclockwise. (Note original screw positions. If realigning sensors does not alleviate problem, return to original positions.)
3. Replace marker assembly.

GENERAL IMAGER PROBLEMS

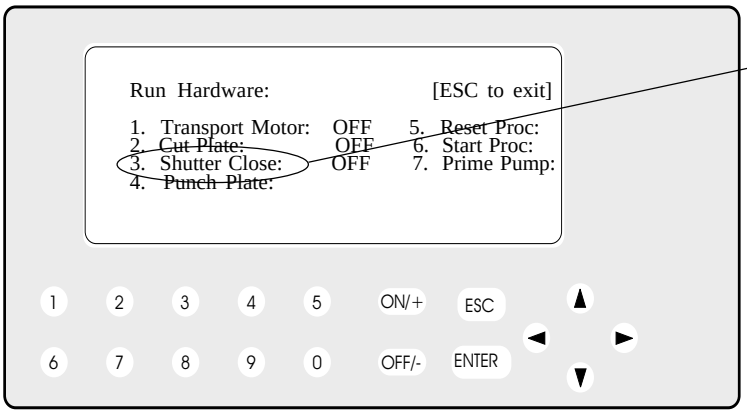
Platesetter spontaneously "reboots."	1. Check AC voltage. The specification is 200 - 264 Volts; 50/60 Hz. 2. Protect against AC power glitches. 2.1. Check for correct AC power wiring, especially grounding. 2.2. Install AC power conditioner. 3. To diagnose intermittent DC problems, track platesetter state at time of reboot (*e.g.*, was cutter cutting, punch punching, processor starting?)
"Power out of spec" message	1. Check fuses in power supply. 2. Check voltages at controller PCA. Specifications are (+5V -0, +0.25V); (+12 $\pm$0.6V); (-12V $\pm$0.6V) and (24V $\pm$ 1.2V).
Platesetter is on-line but will not start a job.	1. Check the I/O cable from the RIP. 2. Power cycle the Platesetter. 3. Reset the RIP. 4. Replace the controller PCA.

GENERAL IMAGER PROBLEMS (...cont.)

All silver plates
(Shutter problems)

(All-silver plates usually indicates the shutter isn't opening properly.)

1. Check to make sure the correct media is used for printing and the emulsion side is up.
2. Check that the shutter spring is in place and operating.
3. Verify that the shutter plate isn't hitting the capstan roller. To adjust, loosen screws on the outside of the transport on the operator and non-operator side. Adjust the shutter plate to 1/32" to 1/16" (0.8 to 1.6 mm) from the capstan roller


Run Hardware: [ESC to exit]
1. Transport Motor: OFF
2. Cut Plate: OFF
3. Shutter Close: OFF
4. Punch Plate:
5. Reset Proc:
6. Start Proc:
7. Prime Pump:
1 2 3 4 5 ON/+ ESC
6 7 8 9 0 OFF/- ENTER

4. Open and close the shutter from the Operator Panel hardware menu.

4.1. If the shutter solenoid isn't operating, check the solenoid with an ohmmeter for a short or open (its resistance should be approximately 55 ohms). If the solenoid is open or shorted, replace the solenoid.

4.2. If the solenoid is OK but not being actuated, replace the interface PCA.

4.3. If the solenoid is actuating, but the shutter isn't fully opening, check that the moveable arm moves freely.

4.4. If the moveable arm doesn't move freely, loosen the screws that control the arm until it moves freely.

GENERAL IMAGER PROBLEMS (...cont.)

Light leaks.

1. Check the light seals around the panels and top cover with a flashlight. Also check light panels/ baffles in and around the processor.
3. Move the platesetter away from bright light sources such as windows. If this is not possible, orient the platesetter with the processor end is away from light sources.
4. If unable to resolve the problem, send sample plates to Printware. (Send 22"-long plate with a gray test pattern).

GENERAL IMAGER PROBLEMS (...cont.)

"No media" or
"Media not loaded far enough" messages.

1. Verify that there is media in the machine.
2. Manually feed the media up to the capstan roller.
3. Check for faulty "No Media" switch.
   3.1 Remove media.
   3.2 View Sensor Status on Operator Panel.(1 means media present).
   3.3 Manually actuate the No Media switch.
   - If it the status does not toggle, check that the cable is plugged in sufficiently on both ends and check for damage to the cable itself. Replace either the cable or the switch.
4. If the "No Media" switch and cable test good but there are still spurious "No media" or "Media not loaded far enough" messages, bend the No Media switch lever back toward the left of the machine slightly to increase its sensitivity.

GENERAL IMAGER PROBLEMS (...cont.)

Imaging seems to take too long.

First plates do take longer than plates immediately after the first plate. General guidelines for first plate total times are as follows:

Resolution	No punch	With Punch
2400 DPI:	3 min.	3 min. 30 sec.

MEDIA JAMS (Imager Module)

Media will not load past Guide B

1. If the corner of the media is being “dog-eared” before going into cutter, inspect shutter for problems.
2. Replace Teflon tape non Shutter assembly.

Media gets “dog-eared” before going into cutter.

1. Verify that the shutter plate isn’t hitting the capstan roller. To adjust, loosen screws on the outside of the transport on the operator and non-operator side. Adjust the shutter plate to 1/32" to 1/16" (0.8 to 1.6 mm) from the capstan roller.
2. Adjust the moveable shutter arm farther out.
3. If the media is stubbing on the shutter, replace the Teflon tape on the shutter assembly.

Media buckles in feed section. (Guide A)

1. Verify that edge guides are aligned with spool (see **Operator Guide** for loading procedure)
2. Verify that feed rollers are turning.
3. Check that marker transport belts aren’t slipping
4. Adjust Marker Transport motor speed.

Media jams in Guide B; machine produces 3-5" media strips

1. Check for small pieces of media stuck near the cutter.

NOTE: This problem is often reported after an error message prompts the user to cut a plate. If the cut plate is not removed, Guide B jams can result. Current firmware prompts the user just to “back up” (and not “cut”) after certain errors.

Media jams in cutter

1. Adjust the cutter infeed guides.
2. Adjust the cutter blade (see procedures under “**Cutter cycles but doesn’t cut**”).

IMAGER MODULE SENSOR PROBLEMS

Guide B Sensor blocked

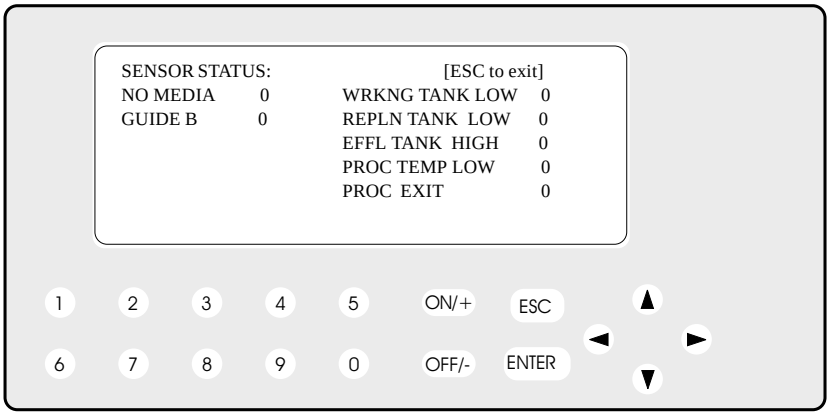
1. Ensure that the cable harness is plugged into the sensor.
2. Check for any pieces of media that may be stuck in the punch.
3. Remove the rear panel and use a flashlight to see if there are any scraps of media in the punch/cutter path.

Guide B Sensor faulty

1. If there is no media blocking the guide B sensor, the switch may be damaged. From the Operator Panel, go to the Sensor Status menu to test the switch.

2. Open top cover. Lift capstan guide arm, and separate the capstan roller from the pinch roller on the exit side of the imager. Push a piece of paper through these rollers and the center of the punch assembly, over the sensor. The Sensor Status should toggle between "1" and "0" as you activated and deactivate the sensor. (Current firmware will show a "1" when engaged, and a "0" when disengaged. Older firmware may show the opposite status numbers, but will still toggle between them.) Move the paper over the sensor several times while watching the sensor status, to be sure the sensor is not sticking.

3. If Sensor Status does not toggle between "1" and "0," the sensor should be replaced.



Sensor status menu

CUTTER PROBLEMS

Cutter won't cycle.

1. Check and re-seat cutter connector.
2. Check for loose wires on the cutter switch (non-operator side of machine).
3. See if the cutter motor shaft spins by hand (the shaft coming out of the back of the motor).
4. Check for any media stuck in cutter.
5. Check motor winding resistance (normally 10 to 100Ω). If motor is shorted or open, replace the cutter.

Cutter won't stop cycling.

1. Switch misadjusted.
   1.1. If switch is open, the cutter wheel should turn one-third of a revolution.
   1.2. If switch is activated, the wheel should turn 2 to 4 revolutions without stopping.
2. Switch failed.
   2.1. Turn the shaft on the back of motor by hand (you should be able to hear the switch click).
   2.2. Check the switch with an ohmmeter in the open and closed positions.

Cutter cycles but doesn't cut.

1. Remove cutter assembly so cutting blade can be adjusted.
2. Lay cutter on a table with cutter blade facing up.
3. Turn blade by spinning silver shaft on back of motor by hand (clockwise), until blade comes down to lowest point in its rotation.
4. Loosen set screws on arm with a metric Allen wrench.
5. Rotate cutter blade shaft on opposite end with pliers until blade is ¾ of the way through the silver plate on the inside.
6. Tighten set screws on arm and test the cutter before reinstalling cutter in machine.

PUNCH PROBLEMS

Punch does not operate or does not punch all the way through

1. At the Operator Panel, verify that the punch option is turned on.
2. At the regulator on the compressor, check the air pressure (should be approx. 80 psi).
   2.1. If no air pressure:
   - Check that the compressor is plugged in and turned on.

   - If you can hear the compressor, try adjusting the regulator control on the air compressor.

   - Check for leaks around air hosefittings on the punch, the punch solenoid, and the air compressor.

   - If air pressure is still inadequate, replace the compressor.

   2.2. If air pressure is adequate:
   - Check the cable from the punch solenoid to the interface PCA and re-seat the cable.

   - Check that the air compressor gauge is not stuck. Purge the air by opening the valve on the bottom of the glass regulator tube. Then let it come back up to 80 psi.

   - Turn off the platesetter, plug the punch solenoid wire into the shutter connector on the interface PCA. Turn the Platesetter power back on, and then at the Operator Panel, run the shutter to see if the punch operates. If so, replace the interface PCA.

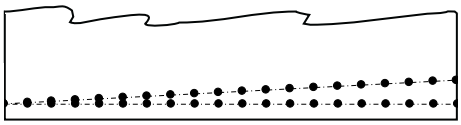
   - If the punch doesn't work when plugged into the shutter connector on the interface PCA, replace the punch solenoid/cable assembly (order both and have them wired together at the factory before shipment).

PUNCH PROBLEMS (...cont.)

Media gets stuck in punch

1. Clear chips from the system:
   1.1. If a vacuum cleaner is available, attach it to the punch plate plumbing to extract any build up of chips (this may be operator or non-operator side, depending on the chip collector configuration).

Double punch with twisted plate



1. This problem is caused by a hooked edge of the punch pattern snagging the plate.
   1.1. Adjust punch side to side so that only complete holes are being punched. This may require a press adjustment.
   1.2. Use wider or narrower media so that only complete holes are being punched.

Overheated compressor

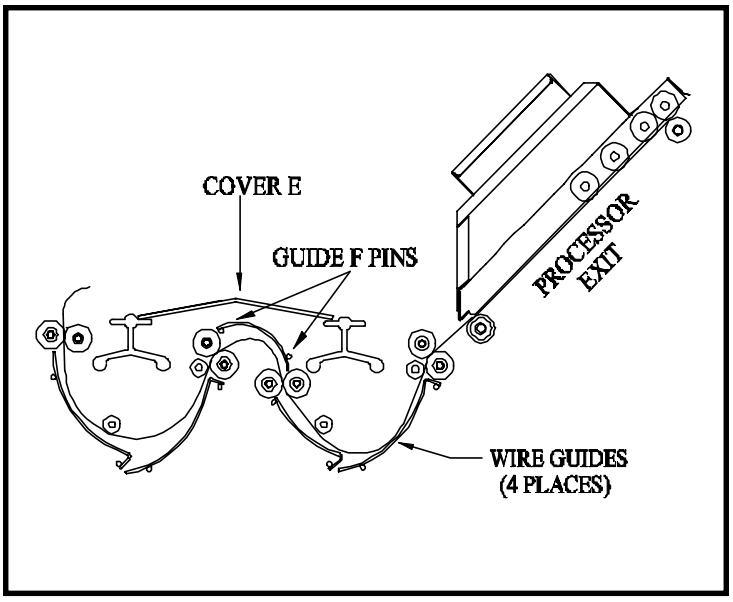
1. Check lubricant level (lubricant could have leaked out if the compressor had been tipped). When the compressor is running the sight glass should be half full. Add Printware part number 901176-002 lubricant up to the half-full mark. Note: Clean the filter in the filler cap with isopropyl alcohol. Dry thoroughly before replacing.

2. Check for air leaks.

PROCESSOR JAMS

Plates jamming at processor entrance.

1. Check that the processor tanks are fully seated.
2. Check that the infeed rollers on the activator rack are turning.
3. Check that the media is falling uniformly into the processor from the imager section.



Correct processor guide placement

Media is being bent in processor.

1. Verify that the wire guides are installed properly. (they are easy to put in backwards)
2. Verify that the media is coming out of imager module straight.
3. Check to see if media comes out of the activator rack straight (under the crossover guide).
4. Adjust activator stop bracket.

Short plates jamming in the activator rack.

1. Verify that plate length is within platesetter limitations (12" or 30 cm minimum).
2. Check that the processor wire guides are correctly installed **(see diagram above for correct processor guide placement).**
3. Verify that the rollers in the activator and stabilizer racks are turning.

One plate comes out of processor, and then the messages "media did not exit processor" and "load media" both come up.

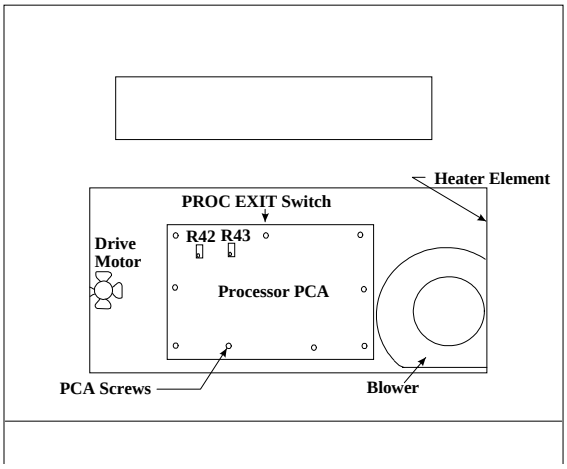
1. Check processor exit switch in Sensor Status menu.
2. Calibrate the processor from Operator Panel.

PROCESSING QUALITY PROBLEMS/ARTIFACTS

Media trailing edge wet.

Some residual chemistry on the media trailing edge is normal. If excessive, however, follow these steps:

1. Verify that the stabilizer tank level is not too high, and that the stabilizer drain tube is seated all the way down.
2. Check the springs on stabilizer rack squeegee rollers. Replace if stretched out.
3. Clean squeegee rollers with D-Ink and rinse with water.
4. Increase dryer hood temperature (potentiometer R43; instructions on end panel). Recommended temperatures are as follows (setting dryer hood temperature too low can result in wet plates, too high a temperature can result in media curl):
   - Thin paper: 100°F (38°C).
   - Thin poly or thick paper: 110°F (43°C).
   - Thick polyester: 120°F (49°C).



Processor adjustments (right side panel)

PROCESSING QUALITY PROBLEMS/ARTIFACTS
(...cont.)

Brownish-looking plates in silver areas.	1. Check the activator and dryer temperatures. 2. Clean the rollers. 3. Change processor chemistry. 4. Increase the replenishment rate.
Yellow stabilizer stains.	1. Decrease dryer temperature.
Dirty roller marks on plates.	1. Clean the rollers. 2. Change processor chemistry.

PROCESSOR MECHANICAL PROBLEMS

Activator or Stabilizer rollers don't turn.

1. Pull the rack out of the platesetter and check that the idler gears are meshing properly with the other gears. Adjust gears if necessary.
2. Check the end play of rollers, which should be approximately 0.010 to 0.020" (0.25 to 0.5 mm).
3. Check for loose pulley or gear set screws. Adjust worm gear drive to better mesh with other gears.

Processor drive motor jumping.

1. Check that the activator and stabilizer transport racks turn freely by hand.
2. Lower the drive motor to increase belt tension.
3. If motor cannot be moved lower, shim the motor bracket away from the frame using the lock washers.

Processor noisy.

1. Squealing noise may be the pulley on the end of the worm gear. Apply light oil or Teflon spray.
2. Motors generally make noise. If too loud, replace processor drive motor.

Replenishment pumps noisy.

1. Check to see if the hoses coming from pumps are pinched.
2. Replace pumps.

PROCESSOR SENSOR PROBLEMS

Spurious low replenishment level error message.

This problem is caused by faulty replenishment level probes.

1. Check the probe connectors.
2. Check the cable. Place one ohmmeter probe on replenishment probe and the other on the P2 cable. Check both replenishment probes for continuity. If cable checks out OK, replace the PCA. Otherwise, replace the cable.

Effluent probe not working.

1. Check probe connector.
2. Check cable P3 and PCA (see procedures under **Spurious low replenishment message)**

Processor exit switch does not work.

1. Remove the right-side end panel. Push the exit switch actuator at a 45° angle. An indicator light should turn on after a 6-second time delay from the switch clicking on.
    - If there is not an audible click when the switch is actuated, readjust the switch. If it cannot be readjusted, replace the switch.
    - If the switch actuates but the light doesn't come on, replace the switch and cable.
    - If a new switch and cable does not resolve the problem, replace the PCA.

PROCESSOR ELECTRICAL PROBLEMS

Dryer not heating.

1. Check and re-seat connectors J4 and J12 on the Processor PCA.
2. Check fuses F3 and F4 on the processor PCA.
3. Check the Processor PCA

   3.1. Check that dryer heater LEDs A and B are on when the heater should be on (*i.e.*, processor on and Heater Up To Temperature light not on). If LEDs do not go on, replace the processor PCA.

   3.2. If Heater Up To Temperature light is on, set temperature by adjusting potentiometer R43. Clockwise turns heat up on most PCAs (instructions are on the inside of the processor panel).

   3.3. If Heater Up To Temperature light is always on regardless of the R43 setting, replace the thermistor.

4. Check heater element.
   4.1. Remove dryer heater assembly from processor.
   4.2. Check heater element resistance with an ohmmeter. Normal values are:
   Pin 1 to Pin 2: 45Ω
   Pin 1 to Pin 3: 45Ω
   Pin 2 to Pin 3: 88Ω
   Pin 1 to Pin 4: Open

PROCESSOR ELECTRICAL PROBLEMS (...cont.)

Replenishment pumps not turning.

1. Check the effluent tank. If it is full, the pumps will not come on.
2. If the replenishment tanks are low the pump will not come on.
3. Check the “Check Pump prime” light on processor PCA. If the light does not come on when the pumps should be on, replace the processor PCA.
4. Measure the voltage across the pumps at TS2-2 (brown) and TS2-3 (blue).
   - If 220V is present, replace pump assembly.
   - If 220V isn’t present, the replace the processor PCA.

Pumps turning but fluid output is inadequate.

1. Verify that there is chemistry in the replenishment tanks.
2. Check for leaking hoses.
3. Check for air in the hoses. If there is, unplug the hose from tank and hold the end over the tank as it pumps until the air is cleared.
4. Check for pinched hoses.
5. Adjust pump rate (see Installation Guide chapter 1 for adjustment procedures).

Activator bath is too hot.

1. Turn heat down on processor PCA by adjusting potentiometer R42 (the temperature specification is 86º±2ºF or 30º±1ºC).
2. Replace temperature probe.

PROCESSOR ELECTRICAL PROBLEMS (...cont.)

Processor drive motor does not work.

1. Remove both racks and turn on the processor. If the motor comes on with the racks removed, replace one rack at a time. If adding a rack causes the motor to stop, check the meshing of the gears and the roller end play of that rack.
2. Check the worm drive.
3. Remove the right-side end panel, and measure the voltage across motor.
    - If voltage reads 220V, with motor on, but the motor is not spinning, replace motor.
    - If there is no voltage across the motor, check fuse F5 on the PCA. If the fuse is good, replace the PCA.
4. Turn the white motor fan blade by hand. If it doesn't turn easily, disconnect the drive belt and try again. If it still does not turn easily, replace the motor assembly.

MEDIA PROBLEMS

Media has excessive curl.

1. Check for excessive curl in media. Lay a 12" length of material on a flat surface and hold down one end. If the other end of the media curls up more than 2", replace media, it does not meet the manufacturer's specifications.

2. Decrease dryer hood temperature (potentiometer R43; instructions on end panel).

PRESS-RELATED PROBLEMS (refer to troubleshooting guides for supplies for most press problems)

Short run length

1. Check press roller settings. Recommended settings for most presses are:
   - Form to Plate stripe: 1/8" (3 mm)
   - Plate to Blanket stripe: 3/16" (5 mm)
2. Verify that exposure is set correctly by checking D_{max}. Laser power too high can cause short run lengths.
3. Reduce laser power.

807514-001

Printware

CABLE 803319-002

POWER SUPPLY DRAWER 807046-001 J4	RED	+5V	1
	BLACK	GND	2
	RED	+5V	3
	BLACK	GND	4
	YELLOW	+12V	5
	BLACK	GND	6
	BLUE	-12V	7
	BLACK	GND	8
	ORANGE	+24V	9
	BLACK	GND	10

INTERLOCK ASSY 806307-002 J7	INTERLOCK PWR		1
		-12V	2
		NC	3

LASER ASSY 803280-001 IR 807220-TAB RED J1	RED	LASER	1
	BLACK	GND	2
	BLUE	-12V	3
	BLACK	GND	4
	BROWN	PHOTODIODE	5
	BLACK	GND	6

GALVO ASSY 807049-001 J14	GREEN	G DRVB +	1
	WHITE	G SENSE +	2
	GREEN	G DRV1 +	3
	RED	G DRVB -	4
	BLACK	G SENSE -	5
	RED	G DRV1 -	6

SENSOR ASSY 807151-001 J11	RED	SOS C	1
	GREEN	SOS SIG	2
	WHITE	SOS REF	3
	RED	SOT C	4
	WHITE	SOT SIG	5
	GRAY	SOT REF	6

TO RIP 807521-004 J3		1
		2
		3
		4
		5
		6

CONTROLLER PCA
522980-001 IR
522980-002 RED

SCHEMATIC PAGE 3

CONNECTORS NOT USED
J2, J5, J15, J16, AND SPARE

J6 J7 J1 J14 J11 J3 J9 J8

CABLE 807150-002

1	BROWN	NC	1
2	RED	PRN GND	20
3	ORANGE	NC	2
4	YELLOW	PRN GND	21
5	GREEN	NC	3
6	BLUE	PRN GND	22
7	VIOLET	NC	4
8	GRAY	PRN GND	23
9	WHITE	NC	5
10	BLACK	PRN GND	24
11	BROWN	PIX ENBL	6
12	RED	PIX ENBL *	25
13	ORANGE	PIX CLK	7
14	YELLOW	PIX CLK *	26
15	GREEN	PRN D0	8
16	BLUE	PRN D0 *	27
17	VIOLET	PRN D1	9
18	GRAY	PRN D1 *	28
19	WHITE	PRN D2	10
20	BLACK	PRN D2 *	29
21	BROWN	PRN D3	11
22	RED	PRN D3 *	30
23	ORANGE	PRN D4	12
24	YELLOW	PRN D4 *	31
25	GREEN	PRN D5	13
26	BLUE	PRN D5 *	32
27	VIOLET	PRN D6	14
28	GRAY	PRN D6 *	33
29	WHITE	PRN D7	15
30	BLACK	PRN D7 *	34
31	BROWN	PRN R / W *	16
32	RED	PRN R * /W	35
33	ORANGE	PRN STRB	17
34	YELLOW	PRN STRB *	36
35	GREEN	PRN ACK	18
36	BLUE	PRN ACK *	37
37	VIOLET	PRN GND	19
38	NC		
39	NC		
40	NC		

TO RIP

AC IN
240 VAC
50 / 60 HZ
806420-TAB

POWER SUPPLY INTEGRATED ASSY
808046-TAB

SCHEMATIC PAGE 2

VENT FAN 900894-001

BROWN BLUE

AC + BLACK
AC - WHITE
GREEN

600267-002 SWITCH
AC + 1 2 BROWN
AC - 3 BLUE
CIRCUIT BREAKER

EMI FILTER CORCOM 30VK6 25A / 40 F 250V
900813-001

807203-001

DC POWER SUPPLY 901142-001

BROWN 1 LINE
BLUE 2 NEUTRAL
GREEN 3 GROUND

+5V
+5V
GND
GND
+24V
-12V
+12V
+ GND

ALL FUSES 250V 7A 600122-001

+5V FUSE
+24V FUSE
-12V FUSE
+12V FUSE

J6 522780

POWER DISTRIBUTION PCA

J1
CABLE 803321-001

(1)	RED	ENG STP +5V	
(2, 3)	ORANGE	ENG STP +24V	
(5, 6, 7,)	BLACK	ENG STP GND	
(4)	ORANGE	+24V	
(8)	BLACK	GND	

ENG STEPPER

J4
CABLE 803319-002

(1, 7)	RED	CONT +5V	
(3)	YELLOW	CONT +12V	
(4)	BLUE	CONT -12V	
(6)	ORANGE	CONT +24V	
(2, 5, 8, 9, 10)	BLACK	CONT GND	
(12)	ORANGE	VENT FAN +24	
(11)	BLACK	VENT FAN RTN	

CONTROLLER

J5
CABLE 803312-003

(1, 2)	RED	INTRF +5V	
(11)	YELLOW	INTRF +12V	
(6)	BLUE	INTRF -12V	
(7)	ORANGE	INTRF +24V	
(3, 5, 10, 14)	BLACK	INTRF GND	
(8)	RED	OP +5V	
(4)	YELLOW	OP +12V	
(13)	BLUE	OP -12V	
(9, 12)	BLACK	OP GND	

INTERFACE OP PANEL

J2 J3

AC POWER

WIRE COLOR		
DOMESTIC	INTERNATIONAL	VOLTAGE
BLACK	BROWN	AC+
WHITE	BLUE	AC-
GREEN	GREEN/YELLOW	GROUND

DC POWER

WIRE COLOR	VOLTAGE
RED	+5V
YELLOW	+12V
BLUE	-12V
ORANGE	+24V
WHITE	SIGNAL
BLACK	GROUND
GREEN	CHASISE GND

J1 J2 J3 J4 J5 J6

PIN ASSIGNMENTS
FROM FRONT OF P. S. DRAWER

CABLE 807530-001

CABLE 807520-002

POWER SUPPLY DRAWER J5	RED	RED	1
	BLACK	BLACK	2
	RED	RED	3
	BLACK	BLACK	4
	YELLOW	YELLOW	5
	BLACK	BLACK	6
	BLUE	BLUE	7
	ORANGE	ORANGE	9
			10

TS2 TS1 L1 GND L2

BROWN GREEN BLUE

POWER SUPPLY 220V

BLACK BLACK BLACK NU

J4 J8 J5

PROCESSOR
523200-001

SCHEMATIC PAGE 6

J12

J16

INTERFACE PCA
523060-001

SCHEMATIC PAGE 4

J1 [NU]

J6 [NU]

J4 [NU]

J2

J3

J5

J14

[NU] J13

J11

J15

CABLE 803318-002

1	BROWN	GND	BROWN 1
2	RED	FD STEP	RED 2
3	ORANGE	FD STEP *	ORANGE 3
4	YELLOW	GND	YELLOW 4
5	GREEN	FD RESET	GREEN 5
6	BLUE	FD RESET *	BLUE 6
7	VIOLET	GND	VIOLET 7
8	GRAY	TR STEP	GRAY 8
9	WHITE	TR STEP *	WHITE 9
10	BLACK	GND	BLACK 10
11	BROWN	TR RESET	BROWN 11
12	RED	TR RESET *	RED 12
13	ORANGE	GND	ORANGE 13
14	YELLOW	EX STEP	YELLOW 14
15	GREEN	EX STEP *	GREEN 15
16	BLUE	GND	BLUE 16
17	VIOLET	EX RESET	VIOLET 17
18	GRAY	EX RESET *	GRAY 18
19	WHITE	GND	WHITE 19
20	BLACK	CUT STEP	BLACK 20
21	BROWN	CUT STEP *	BROWN 21
22	RED	GND	RED 22
23	ORANGE	CUT RESET	ORANGE 23
24	YELLOW	CUT RESET *	YELLOW 24
25	GREEN	GND	GREEN 25
26	BLUE	PLG * / OP	BLUE 26
27	VIOLET	PLG / OP *	VIOLET 27
28	GRAY	GND	GRAY 28
29	WHITE	STEP SYNC	WHITE 29
30	BLACK	STEP SYNC *	BLACK 30
31	BROWN	GND	BROWN 31
32	RED	SPARE 3 *	RED 32
33	ORANGE	SPARE 3	ORANGE 33
34	YELLOW	GND	YELLOW 34
35	GREEN	FD / TR DIR	GREEN 35
36	BLUE	FD / TR DIR *	BLUE 36
37	VIOLET	GND	VIOLET 37
38	GRAY	SPARE 1 *	GRAY 38
39	WHITE	SPARE 1	WHITE 39
40	BLACK	GND	BLACK 40
41	BROWN	SPARE 0 *	BROWN 41
42	RED	SPARE 0	RED 42
43	ORANGE	GND	ORANGE 43
44	YELLOW	EX DIR	YELLOW 44
45	GREEN	EX DIR *	GREEN 45
46	BLUE	GND	BLUE 46
47	VIOLET	SPARE 2 *	VIOLET 47
48	GRAY	SPARE 2	GRAY 48
49	WHITE	GND	WHITE 49
50	BLACK	GND	BLACK 50

CABLE 804140-002

1	BROWN	NO MEDIA +5V	
2	RED	NO MEDIA SIG	
3	ORANGE	NO MEDIA GND	
4	YELLOW	NU	
5	GREEN	NU	
6	BLUE	NU	
7	VIOLET	NU	
8	GRAY	NU	
9	WHITE	NU	
10	BLACK	NU	
11	BROWN	NU	
12	RED	NU	
13	ORANGE	NU	
14	YELLOW	NU	
15	GREEN	NU	
16	BLUE	NU	
17	VIOLET	NU	
18	GRAY	NU	
19	WHITE	NU	
20	BLACK	NU	
21	BROWN	NU	
22	RED	NU	
23	ORANGE	NU	
24	YELLOW	NU	
25	GREEN	NU	
26	BLUE	NU	
27	VIOLET	GUIDE B +5V	
28	GRAY	GUIDE B SIG	
29	WHITE	GUIDE B GND	
30	BLACK	NU	

NO MEDIA SENSOR (NO) 807091-001

GUIDE B SENSOR (NO) 807091-001

ENGINE STEPPER PCA
523190-004

SCHEMATIC PAGE 5

J1 [NU]

J3

J4

J2

J8

J6 [NU]

J5

WHEEL CUTTER
PAPER FEED
MARKER TRANS.
DECURL / EXIT
SHEAR CUTTER

CAPSTAN STEPPER 804620-001

YEL WHI

1	BLACK	803323-002	1
2	YELLOW		2
3	RED		3
4	WHITE		4

1	BLUE	
2	RED	
3	GREEN	
4	BLACK	

CUTTER ASSY

1	BLACK	CUTTER SWITCH
2	WHITE	
3	BLACK	CUTTER MOTOR
4	RED	

806127-001

CABLE 803321-001

POWER SUPPLY DRAWER J1	2	+24V	ORANGE 4
	3	+24V	ORANGE 6
	5	GND	BLACK 1
	1	+5V	RED 2
	6	GND	BLACK 3
	7	GND	BLACK 5

CABLE 806306-002

COOLING FAN	RED	+24V	ORANGE 1
	BLACK	FAN DRV *	WHITE 2

CABLE 807226-001

PUNCH 807301-001	1		WHITE 1
	2	NU	ORANGE 2
			WHITE 3
			ORANGE 4

806099-001 SHUTTER SOLENOID	WHITE	+24V	ORANGE 1
	WHITE	SHUTTER DRV *	WHITE 2
SHUTTER SOLENOID 806099-001	WHITE	+24v	ORANGE 3
	WHITE	SHUTTER DRV *	WHITE 4

CABLE 807204-001

1	BROWN	WORKING TANKS LOW *	BROWN 1
2	RED	GND	RED 2
3	ORANGE	REPLN TANKS LOW *	ORANGE 3
4	YELLOW	GND	YELLOW 4
5	GREEN	EPT TANK HIGH *	GREEN 5
6	BLUE	GND	BLUE 6
7	VIOLET	PROC TEMP *	VIOLET 7
8	GRAY	GND	GRAY 8
9	WHITE	FILM EXIT *	WHITE 9
10	BLACK	GND	BLACK 10
11	BROWN	SPARE *	BROWN 11
12	RED	GND	RED 12
13	ORANGE	+5V PULL-UP	ORANGE 13
14	YELLOW	SOT *	YELLOW 14
15	GREEN	+5V PULL-UP	GREEN 15
16	BLUE	DRIVE INH *	BLUE 16
17	VIOLET	+5V PULL-UP	VIOLET 17
18	GRAY	RESET *	GRAY 18
19	WHITE	+5V PULL-UP	WHITE 19
20	BLACK	PUMP PRIME *	BLACK 20
21	BROWN	+5V PULL-UP	BROWN 21
22	RED	SPARE *	RED 22
23	ORANGE	NU	ORANGE 23
24	YELLOW	NU	YELLOW 24
25	GREEN	NU	GREEN 25
26	BLUE	NC	BLUE 26

EFFLUENT TANK LEVEL PS 806815-002 — 806792-001 — J3
REPLENISHMENT TANK SENSORS 806709-001 — 806790-001 — J2
WORKING TANK SENSORS 806800-001 — 806793-001 — J6
EXIT SWITCH 600333-001 — 806789-001 — J7
DRIER TEMP SENSOR 600330-001 — 806788-001 — J12
ACT TEMP PROBE 806786-001 — J10
J11 [NU]
J9 [NU]
J1

SCHEMATIC PAGE 1

REV	ECO	DESCRIPTION	DRAWN BY / DATE	APPVL / DATE
A	06860	INITAL RELEASE	DAS 11/22/00	

DRAWN BY DAS 06/21/00
ENG.
ENG. APPVL.
MFG
Q.A.

TOLERANCE UNLESS OTHERWISE SPECIFIED
ANGLES ..... .5 DEG
1 PLACE DECIMALS ..... ---
2 PLACE DECIMALS ..... .02
3 PLACE DECIMALS ..... .010

PRINTWARE INC.
ST. PAUL, MN

MATERIAL

FINISH

Title
WIRING DIAGRAM - PlateStream SC

COMM. CODE
FIRST USED ON

Size: B
700636-001
INSP. VERSION
REV A
SCALE: NONE
Sheet 1 of 6

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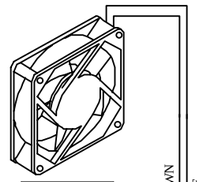
TAB BLOCK	
PART NO.	DESCRIPTION
807046-001	NORTH AMERICAN
807046-501	INTERNATIONAL
806420-003	FOR NORTH AMERICAN USE (BLACK, WHITE, GREEN WIRE)
806420-004	FOR INTERNATIONAL USE (BROWN, BLUE, GREEN/YELLOW WIRE)

POWER SUPPLY INTEGRATED ASSY
808046-TAB



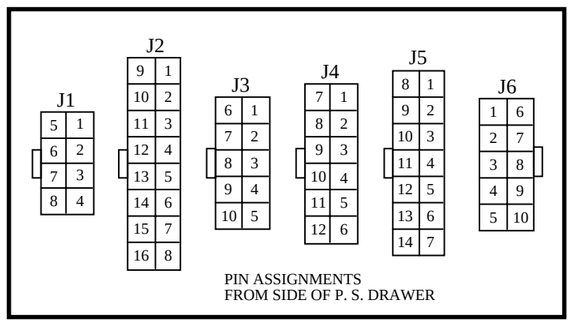
AC POWER

WIRE COLOR

DOMESTIC	INTERNATIONAL	VOLTAGE
BLACK	BROWN	AC+
WHITE	BLUE	AC-
GREEN	GREEN/YELLOW	GROUND

DC POWER

WIRE COLOR	VOLTAGE
RED	+5V
YELLOW	+12V
BLUE	-12V
ORANGE	+24V
WHITE	SIGNAL
BLACK	GROUND
GREEN	CHASISE GND



SCHEMATIC PAGE 2

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ENG.		
ENG. APPVL.		
MFG		
Q.A.		

TOLERANCE UNLESS OTHERWISE SPECIFIED
ANGLES..... .5 DEG
1 PLACE DECIMALS..... ....
2 PLACE DECIMALS..... .02
3 PLACE DECIMALS..... .010

PRINTWARE INC.
ST. PAUL, MN

MATERIAL

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Title ***WIRING DIAGRAM - PlateStream N.O.***

COMM. CODE	Size:		INSP. VERSION	REV
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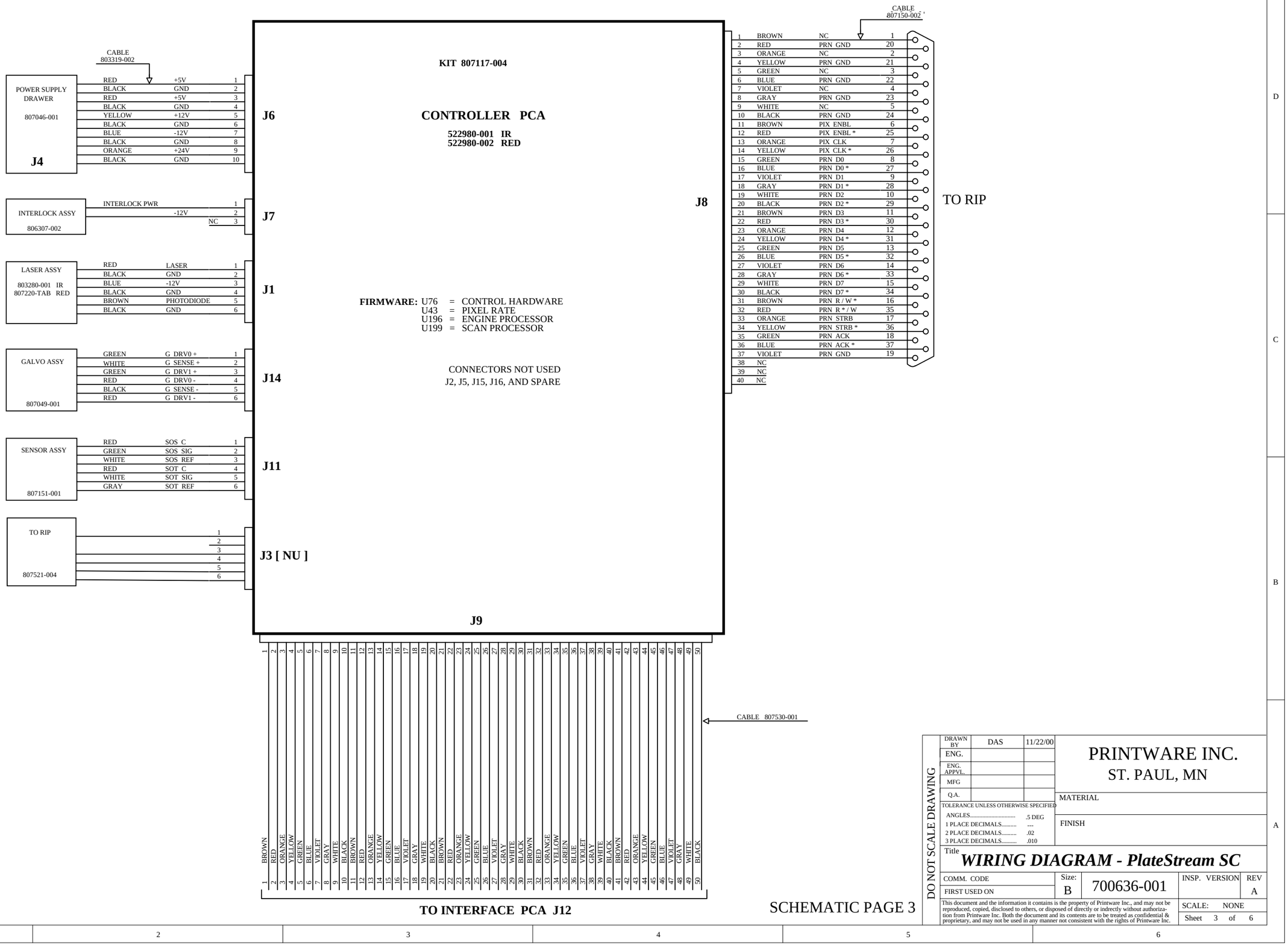
CABLE 803319-002
POWER SUPPLY DRAWER
807046-001
J4
RED +5V 1
BLACK GND 2
RED +5V 3
BLACK GND 4
YELLOW +12V 5
BLACK GND 6
BLUE -12V 7
BLACK GND 8
ORANGE +24V 9
BLACK GND 10
J6
INTERLOCK ASSY
806307-002
INTERLOCK PWR 1
-12V 2
NC 3
J7
LASER ASSY
803280-001 IR
807220-TAB RED
RED LASER 1
BLACK GND 2
BLUE -12V 3
BLACK GND 4
BROWN PHOTODIODE 5
BLACK GND 6
J1
GALVO ASSY
807049-001
GREEN G_DRV0 + 1
WHITE G_SENSE + 2
GREEN G_DRV1 + 3
RED G_DRV0 - 4
BLACK G_SENSE - 5
RED G_DRV1 - 6
J14
SENSOR ASSY
807151-001
RED SOS_C 1
GREEN SOS_SIG 2
WHITE SOS_REF 3
RED SOT_C 4
WHITE SOT_SIG 5
GRAY SOT_REF 6
J11
TO RIP
807521-004
1
2
3
4
5
6
J3 [NU]
KIT 807117-004
CONTROLLER PCA
522980-001 IR
522980-002 RED
FIRMWARE: U76 = CONTROL HARDWARE
U43 = PIXEL RATE
U196 = ENGINE PROCESSOR
U199 = SCAN PROCESSOR
CONNECTORS NOT USED
J2, J5, J15, J16, AND SPARE
J8
CABLE 807150-002
1 BROWN NC 1
2 RED PRN_GND 20
3 ORANGE NC 2
4 YELLOW PRN_GND 21
5 GREEN NC 3
6 BLUE PRN_GND 22
7 VIOLET NC 4
8 GRAY PRN_GND 23
9 WHITE NC 5
10 BLACK PRN_GND 24
11 BROWN PIX_ENBL 6
12 RED PIX_ENBL * 25
13 ORANGE PIX_CLK 7
14 YELLOW PIX_CLK * 26
15 GREEN PRN_D0 8
16 BLUE PRN_D0 * 27
17 VIOLET PRN_D1 9
18 GRAY PRN_D1 * 28
19 WHITE PRN_D2 10
20 BLACK PRN_D2 * 29
21 BROWN PRN_D3 11
22 RED PRN_D3 * 30
23 ORANGE PRN_D4 12
24 YELLOW PRN_D4 * 31
25 GREEN PRN_D5 13
26 BLUE PRN_D5 * 32
27 VIOLET PRN_D6 14
28 GRAY PRN_D6 * 33
29 WHITE PRN_D7 15
30 BLACK PRN_D7 * 34
31 BROWN PRN_R / W * 16
32 RED PRN_R * / W 35
33 ORANGE PRN_STRB 17
34 YELLOW PRN_STRB * 36
35 GREEN PRN_ACK 18
36 BLUE PRN_ACK * 37
37 VIOLET PRN_GND 19
38 NC
39 NC
40 NC
TO RIP
J9
1 BROWN
2 RED
3 ORANGE
4 YELLOW
5 GREEN
6 BLUE
7 VIOLET
8 GRAY
9 WHITE
10 BLACK
11 BROWN
12 RED
13 ORANGE
14 YELLOW
15 GREEN
16 BLUE
17 VIOLET
18 GRAY
19 WHITE
20 BLACK
21 BROWN
22 RED
23 ORANGE
24 YELLOW
25 GREEN
26 BLUE
27 VIOLET
28 GRAY
29 WHITE
30 BLACK
31 BROWN
32 RED
33 ORANGE
34 YELLOW
35 GREEN
36 BLUE
37 VIOLET
38 GRAY
39 WHITE
40 BLACK
41 BROWN
42 RED
43 ORANGE
44 YELLOW
45 GREEN
46 BLUE
47 VIOLET
48 GRAY
49 WHITE
50 BLACK
CABLE 807530-001
TO INTERFACE PCA J12
SCHEMATIC PAGE 3
DO NOT SCALE DRAWING
DRAWN BY DAS 11/22/00
ENG.
ENG. APPVL.
MFG
Q.A.
TOLERANCE UNLESS OTHERWISE SPECIFIED
ANGLES..... .5 DEG
1 PLACE DECIMALS..... ---
2 PLACE DECIMALS..... .02
3 PLACE DECIMALS..... .010
PRINTWARE INC.
ST. PAUL, MN
MATERIAL
FINISH
Title
WIRING DIAGRAM - PlateStream SC
COMM. CODE
FIRST USED ON
Size: B
700636-001
INSP. VERSION
REV A
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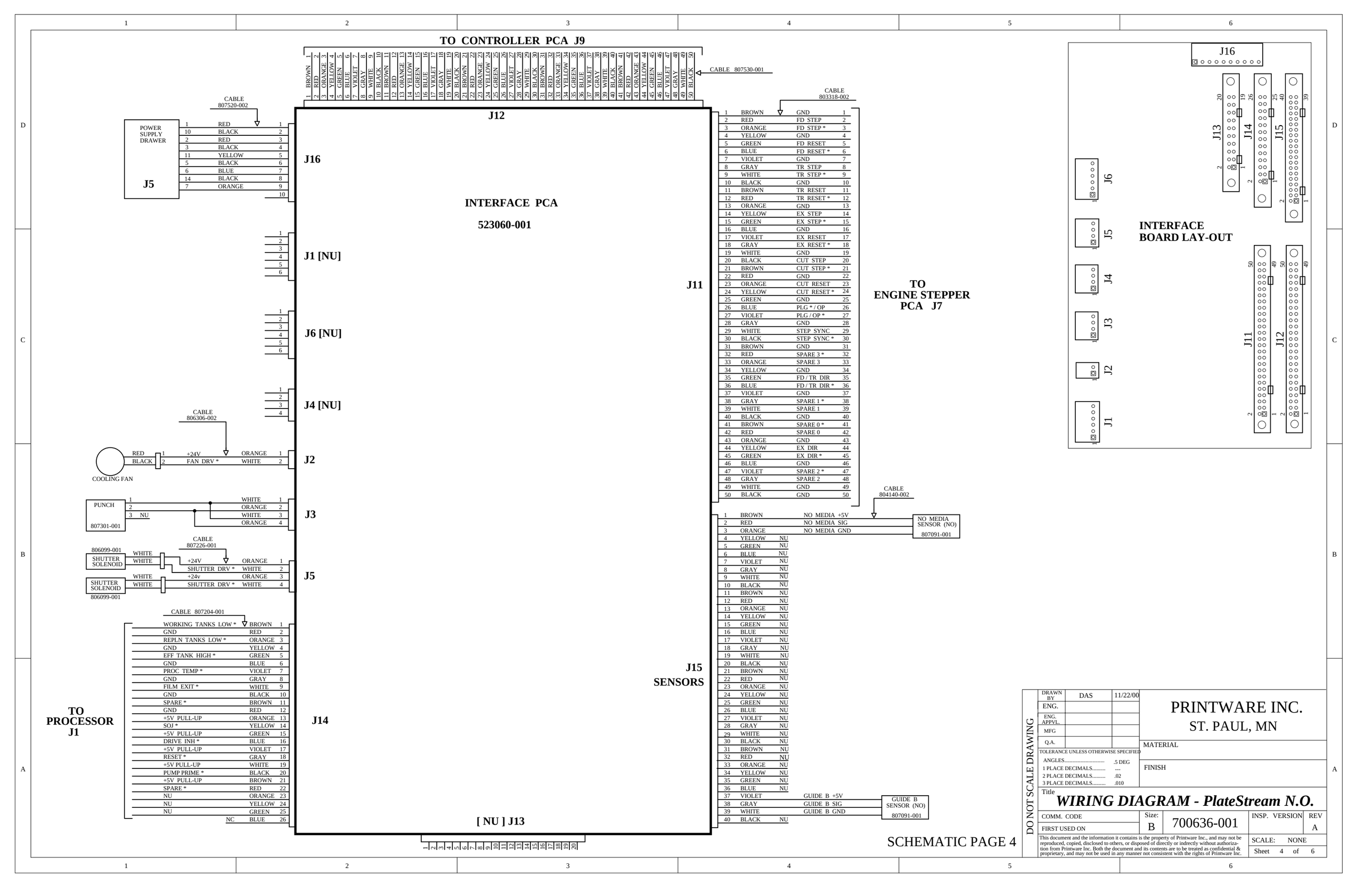

SCHEMATIC PAGE 4

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DRAWN BY	DAS	11/22/00
ENG.		
ENG. APPVL.		
MFG		
Q.A.		

TOLERANCE UNLESS OTHERWISE SPECIFIED

ANGLES	.5 DEG
1 PLACE DECIMALS	---
2 PLACE DECIMALS	.02
3 PLACE DECIMALS	.010

PRINTWARE INC.
ST. PAUL, MN

MATERIAL

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Title
WIRING DIAGRAM - PlateStream N.O.

COMM. CODE	Size: B	700636-001	INSP. VERSION	REV A
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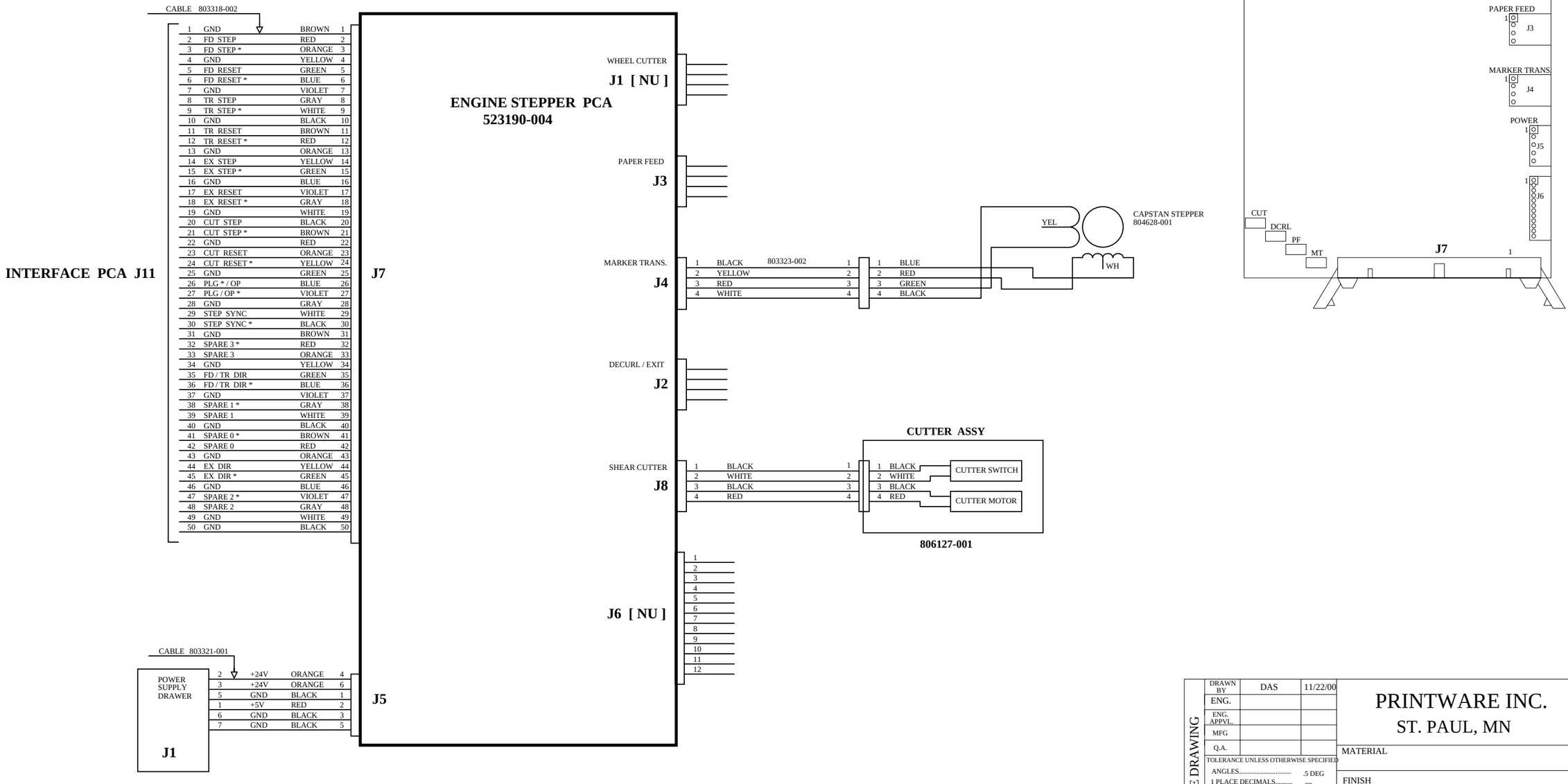

SCHEMATIC PAGE 5

DO NOT SCALE DRAWING

DRAWN BY	DAS	11/22/00
ENG.		
ENG. APPVL.		
MFG		
Q.A.		

TOLERANCE UNLESS OTHERWISE SPECIFIED
ANGLES..... .5 DEG
1 PLACE DECIMALS..... ---
2 PLACE DECIMALS..... .02
3 PLACE DECIMALS..... .010

PRINTWARE INC.
ST. PAUL, MN

MATERIAL

FINISH

Title
WIRING DIAGRAM - PlateStream SC

COMM. CODE	Size: B	700636-001	INSP. VERSION / REV A
FIRST USED ON			SCALE: NONE
			Sheet 5 of 6

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WIRING DIAGRAM - PlateStream N.O.

WIRING DIAGRAM
PS46 808155-001
PSMP 807346-001
PS 807179-001

523150-001
523200-001

EXIT SWITCH
600333-001
806789-001

WORKING TANK SENSORS
806800-001
806793-001

EFFLUENT TANK LEVEL
PS46 806815-001
PS 806815-002
806792-001

ACT TEMP PROBE
806786-001

RIBBON CABLE TO INTERFACE BOARD
PS46 806794-001
PS 807204-001

DRIER TEMP SENSOR
600330-001
806788-001

REPLENISHMENT TANK SENSORS
806709-001
806790-001
(PINS 1 & 2 ARE WHITE) (PINS 3 & 4 ARE BLACK)
(PINS 2 & 4 ACT) (PINS 1 & 3 STAB)

ACT BLANKET HEATER
600335-001

MOUNTING SCREW

PROCESSOR
DRIVE MOTOR
806703-001

RED
BLACK
WHITE
BLACK
WHITE
WHITE
BLACK
WHITE
WHITE
BLACK
WHITE
BLACK

J9 J10 J11 J12 J7 J6 J2 J3 J1

PIN 1 IS BROWN
PIN 26 IS GREEN

TP4 ACT TEMP CAL TP3 DRYER TEMP CAL

F1
5A 250V

TRANSFORMER

EMI FILTER

J8

2A 250V F2
5A 250V F3
5A 250V F4
2A 250V F5

J4 J5

HEATER FAN
806705-001

CHASSIS GROUND

DRYER HEATER
806712-001

REPLENISHMENT PUMPS
806843-001

BLUE
BROWN
YELLOW/GREEN

TS2
8 RED
7 RED
6 GREEN
5 BLACK
4 BLACK
3 BLACK
2
1 GREEN
GREEN
BLACK

TS1
7 BLUE
GREEN
6 GREEN
5 BLACK
4 BROWN
3 BLACK
2 BLACK
1 BLACK
GREEN

L1 BROWN
GND GREEN
L2 BLUE

POWER SUPPLY
220V

SCHEMATIC PAGE 6

DO NOT SCALE DRAWING

DRAWN BY	DAS	11/22/00
ENG.		
ENG. APPVL.		
MFG		
Q.A.		

TOLERANCE UNLESS OTHERWISE SPECIFIED
ANGLES..... .5 DEG
1 PLACE DECIMALS..... ---
2 PLACE DECIMALS..... .02
3 PLACE DECIMALS..... .010

PRINTWARE INC.
ST. PAUL, MN

MATERIAL

FINISH

Title **WIRING DIAGRAM - PlateStream N.O.**

COMM. CODE	Size:		INSP. VERSION	REV
FIRST USED ON	B	700636-001		A

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SCALE: NONE

Sheet 6 of 6

PlateStream SC

Platesetter

Illustrated Parts List

Printware

LEADERS IN COMPUTER TO PLATE

700635-001 Rev A

Assembly Number: 808040-00X

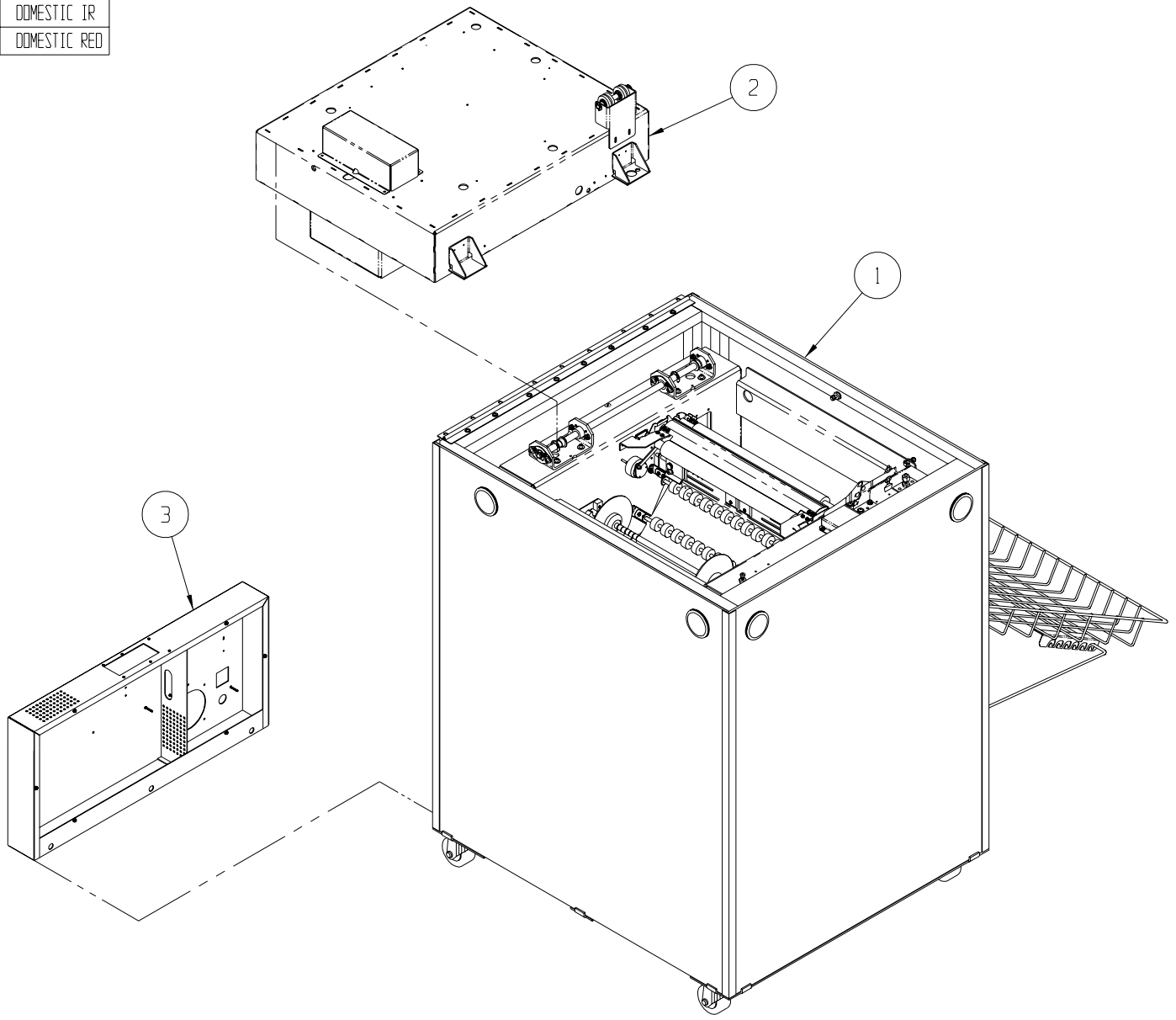
PLATESTREAM SC

Revision: 01

Find Number	Quantity Used	Component Number	Component Description
001	1	808041-001	ASSY-IMAGER SC
002	1	807245-001	ASSY-MARKER 13" IR (SC)
002	1	807245-003	ASSY-MARKER 13" RED (SC)
003	1	808046-001	ASSY-POWER SUPPLY SC DOMESTIC (ORIGINAL)
003	1	808050-001	ASSY-POWER SUPPLY SC DOMESTIC

Main Menu

DASH #	DESCRIPTION
-001	DOMESTIC IR
-002	DOMESTIC RED



Printware

ASSY-PLATESTREAM SC

808040-00X REVISION: A

Sheet 1 of 1

Printware Confidential

Assembly Number: 808041-001

ASSY-IMAGER SC

Revision: D

Find Number	Quantity Used	Component Number	Component Description
002	1	901273-003	KIT-FRAME SC
003	1	807601-001	PANEL-SKIN FRONT
004	1	807601-002	PANEL-SKIN FEED
005	1	807601-003	PANEL-SKIN EXIT
006	1	807601-004	PANEL-SKIN REAR
007	1	807602-001	COVER-TOP
008	1	807607-001	HINGE-CONTINUOUS
009	8	900823-002	LATCH-PULL FLUSH
012	6	900235-002	SCREW-SHOULDER CAP #8-32 X .5"
014	26	900047-000	WASHER-EXTERNAL LOCK #8
015	59	900445-006	SCREW-B.H. TORX #8-32 X .375"
020	28	901279-001	PLATE-NUT #8-32
044	1	808044-001	ASSY-TRANSPORT SC
049	1	807672-001	ASSY-LOWER GUIDE
052	2	900270-003	GAS CYLINDER 60 LBS.
054	6	900233-003	NUT-LOCK K #8-32
057	1	523190-004	PCA-STEPPER-SHEAR CUTTER
058	1	523060-001	PCA-INTERFACE
059	8	900341-003	BUSHING-SPACER, NYLON 6-32 X .375"
060	8	900336-000	NUT-SELF LOCKING HEX #6-32
061	8	900287-007	SCREW-PAN PHILLIPS PANHEAD #6-32 X .75"
062	4	900257	STUD- 10MM BALL- 5/16"-18 THREAD
063	2	900222-003	NUT-HEX 5/16"-18
064	4	900223-007	WASHER-LOCK HELICAL SPRING 5/16"
065	1	900270-009	GAS-CYLINDER 30 LBS.
066	1	900270-004	GAS CYLINDER 20 LBS.
067	1	806843-001	ASSY-PUMP
068	1	807629-001	BRACKET- PUMP MOUNTING
071	4	807624-001	ANGLE-CORNER
076	2	806709-002	ASSY-PROBE
077	1	806719-009	ASSY-TUBE ACTIVATOR
078	1	807312-002	ASSY-TUBE STABILIZER
079	1	806719-008	ASSY-TUBE ACTIVATOR
080	1	807312-003	ASSY-TUBE STABILIZER
081	1	806815-003	ASSY-PROBE EFFLUENT
084	1	807514-001	ASSY-INDICATOR LIGHT
087	2	806866-001	STOP-TRAY ADJUSTABLE
090	4	806825-001	PAD-RACK
116	1	901280-001	CONTAINER-SOLUTION
117	1	807625-001	LID-MODIFICATION
121	1	807637-001	PLATE-MOUNTING, POWER SUPPLY
123	1	807666-001	LABEL-PLATESTREAM SC LOGO

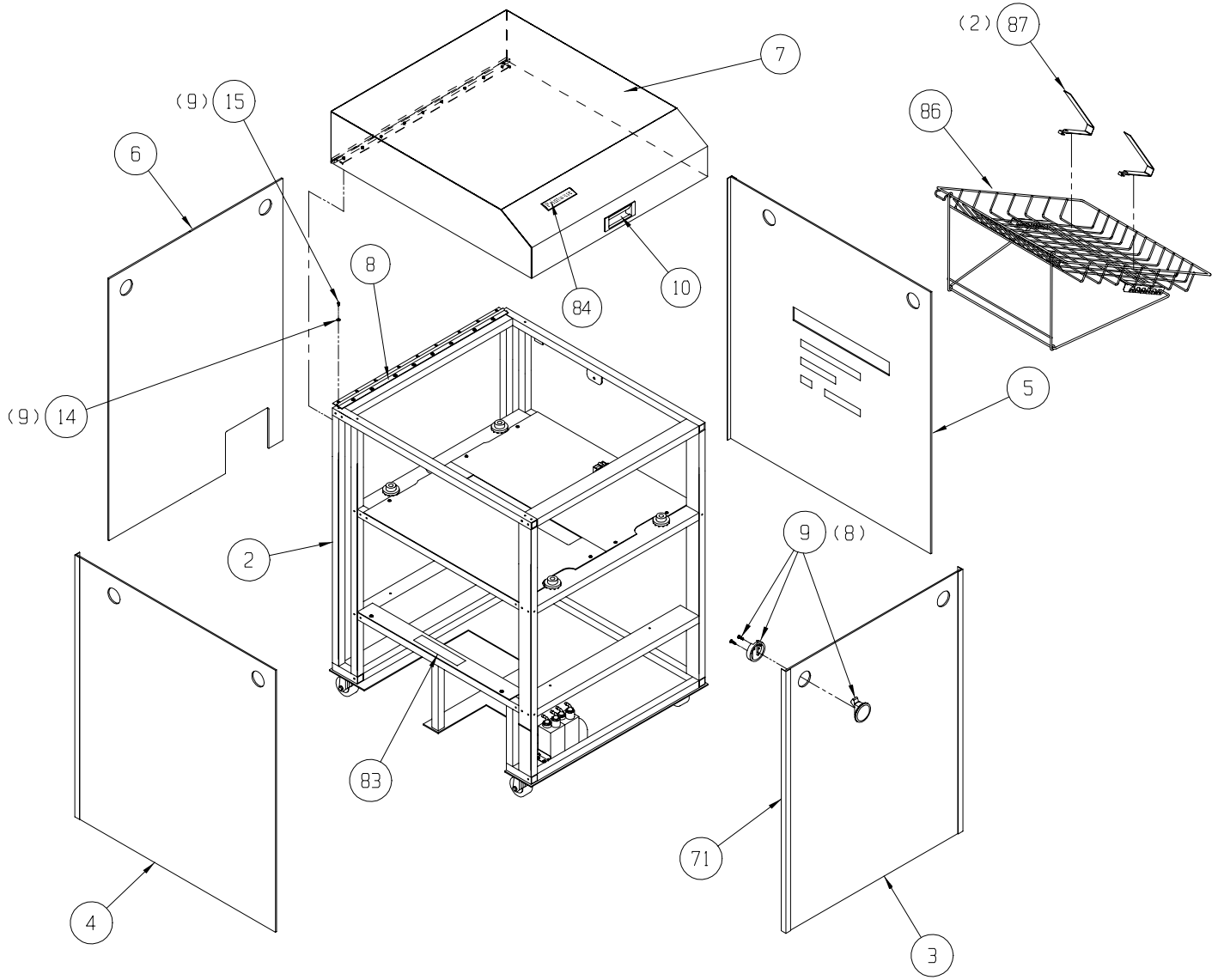
Main Menu

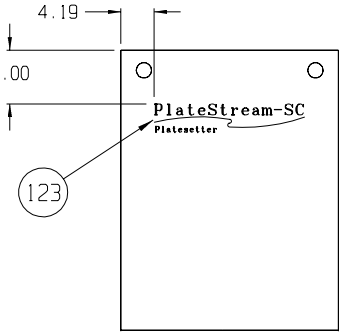
Assembly Number: 808041-001

ASSY-IMAGER SC

Revision: D

86	1	804150-001	TRAY-EXIT





ITEM 3

Printware

ASSY-IMAGER SC

808041-001 REVISION D

Sheet 1 of 2

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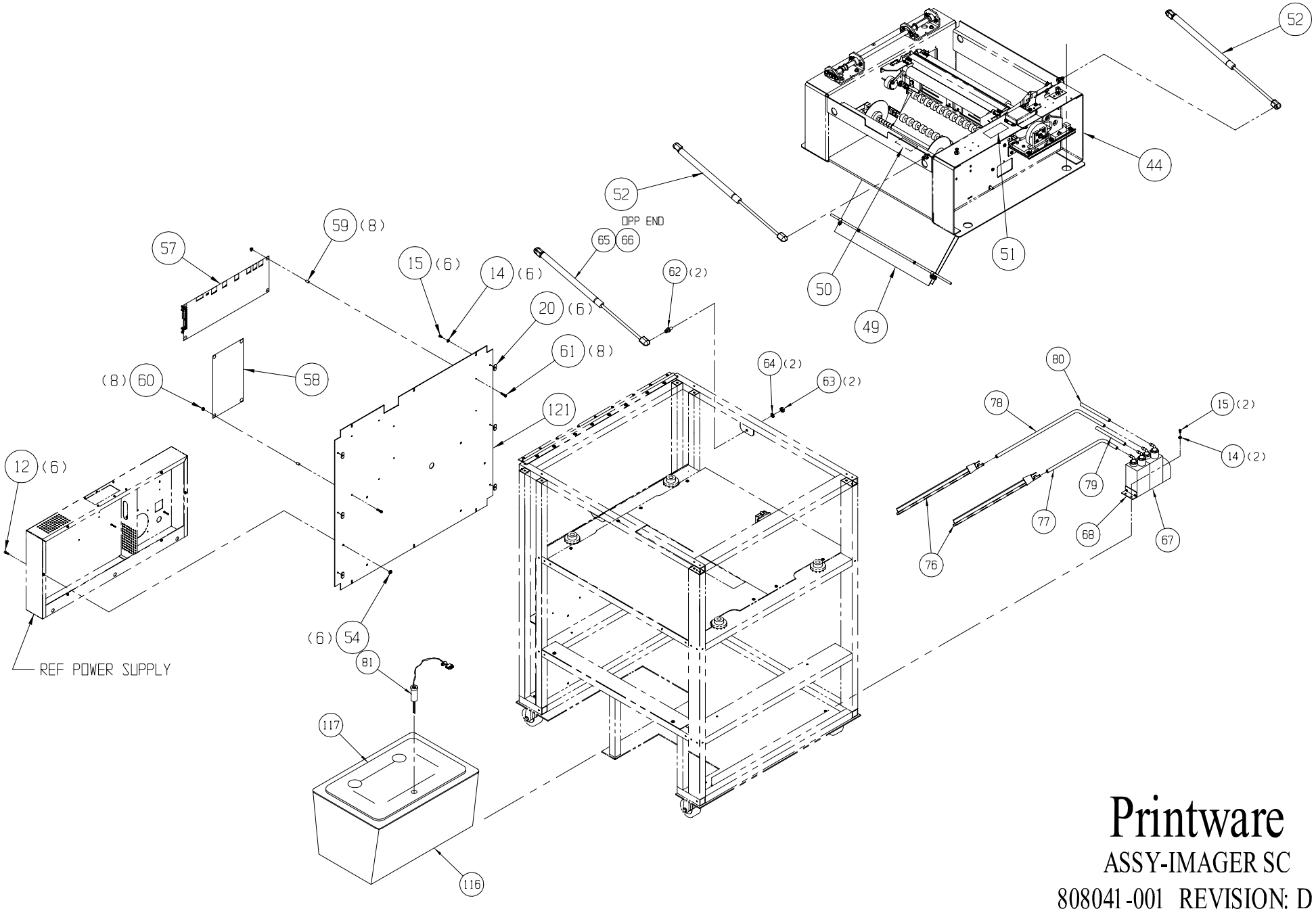


Printware

ASSY-IMAGER SC

808041-001 REVISION: D

Sheet 2 of 2

Printware Confidential

Assembly Number: 808044-001

ASSY-ROLLER TRANSPORT SMALL COMMERCIAL

Revision: C

Find Number	Quantity Used	Component Number	Component Description
001	1	807590-001	WELDMENT-13" ROLLER TRANSPORT
003	1	822307	WASHER-PRELOAD SPRING
005	2	900297-001	BEARING-BALL
006	2	803305-001	RETAINER-BEARING
010	2	807350-001	ROLLER-PINCH, TRACTION, 13"
011	1	804604-001	ROLLER-ALUMINUM CAPSTAN
012	4	900229-002	E-RING, SAE, 3/8" SHAFT
013	2	900360-000	WASHER-WAVE, SPRING, 22MM OD X .01"
014	1	900928-002	NUT-HEX, JAM, 5/8"-18
015	1	901023-001	BUTTON-LOCATING ADJUSTMENT
016	1	900871-008	SCREW-SHC, LOW HEAD, 1/4"-28 X 1.5"
017	1	600354-001	SWITCH-TOGGLE, SPDT, MOMENTARY
018	2	803418-001	ASSY-LOWER, PINCH TENSION
020	1	804627-002	ASSY-CAPSTAN DRIVE, 13"
022	1	803463-001	ASSY-UPPER, PINCH TENSION, RIGHT-HAND
023	1	803466-001	ASSY-UPPER, PINCH TENSION, LEFT-HAND
031	1	806327-001	PLATE-MARKER LOCATING LOWER
039	1	808234-002	KEY-1/8" X 1/8" X 3/4"
040	1	806473-001	GUARD-CAPSTAN PULLEY
041	1	901281-001	CLAMP-HOLD DOWN
042	2	900160-011	WASHER-FLAT STEEL, #6, NARROW
043	2	900287-000	SCREW-PHILLIPS PAN HEAD #6-32 X .5"
044	2	900660-003	STANDOFF HEX, MALE/FEMALE #6-32 X 3/4"
049	1	806309-001	BRACKET-CUTTER MOUNTING
050	1	807091-001	ASSY-SWITCH
051	2	807352-003	SHAFT-15.19"
052	26	807351-001	ROLLER-FOAM
053	4	900230-002	BEARING, NYLON SNAP-IN, .25" SHAFT
054	16	900005-002	RING-GRIP
070	4	807586-001	BRACKET-LOWER SOLID MOUNTING
072	1	807585-001	GUIDE-LOWER SOLID
073	1	807597-001	PLATE-GUIDE UPPER FRONT
079	4	806228-001	BRACKET-LOWER SOLID MOUNTING
080	1	807063-001	BRACKET-BUFFER GUIDE
084	1	807215-001	BLOCK-EDGE GUIDE ADJ
085	1	807216-001	BLOCK-EDGE, GUIDE POSITIONING
086	1	806352-002	PLATE-ADJUST
087	1	806354-002	PLATE-POSITIONING, BLOCK, BACKUP
088	2	807064-001	BRIDGE-MEDIA, INPUT
090	1	807354-001	PULLEY-MODIFIED, .65"
091	1	803713-001	COLLAR-PULLEY
092	1	807356-001	ASSY-PULLEY, OVERRUNNING CLUTCH

Main Menu

Assembly Number: 808044-001

ASSY-TRANSPORT SMALL COMMERCIAL

Revision: C

093	1	807363-001	ASSY-BELT, TENSIONER
094	1	807359-001	SHAFT-BELT, TENSIONER
125	2	806393-001	BRACKET-BEARING, SUPPORT
134	2	900406-006	BEARING-OIL LESS, BRONZE
135	1	806267-001	SHAFT-MARKER, .5"
136	4	806585-001	BEARING-MODIFIED, SELF ALIGNMENT
137	1	900254-002	SPACER-SHAFT INNER 1/2ID X 1/16
142	1	900039-001	SPACER .171" ID, .25" OD, .25" HEIGHT
151	1	804574-001	PULLEY-DUAL, CAPSTAN
157	1	806127-001	ASSY-CUTTER, 13"
158	1	807050-001	ASSY-CAPSTAN GUIDE, 13"
167	7	900235-005	SCREW-SHC, #8-32 X .38"
178	1	900235-035	SCREW-SHC, 1/4"-20 X 1/2"
186	4	900229-003	E-RING, SAE, 1/2" SHAFT
192	1	807068-001	BRACKET-CUTTER MOUNTING
197	1	807069-001	PLATE-CUTTER MOUNTING
198	1	900235-007	SCREW-SHC, #4-40 X .5"
201	4	900319-001	BEARING-NON METALLIC, FLANGED
206	1	900223-000	WASHER-LOCK HELICAL SPRING, 1/4", REGULAR
209	1	900160-009	WASHER-FLAT STEEL, 1/4", REGULAR
236	0	807116-002	PLATE-BACKING SPOOL, .02"
237	0	807116-003	PLATE-BACKING SPOOL, .015"
238	2	807456-001	RECEPTACLE-SPOOL
250	19	900233	NUT-LOCK, #6-32
255	1	900229-008	E-RING-SAE, .625" SHAFT
262	6	900287-019	SCREW-PHILLIPS PANHEAD, #4-40 X .75"
263	6	900233-002	NUT-LOCK, #4-40
264	26	900445-006	SCREW-B.H., TORX, #8-32 X .375"
265	51	900047-000	WASHER-EXTERNAL LOCK, #8
266	9	900445-007	SCREW-B.H., TORX, #8-32 X .5"
272	8	900047-002	WASHER-EXTERNAL LOCK, #6
273	2	900277-022	SPRING-COMPRESSION, 1"X.66"X.072"
274	1	900566-003	KNOB-KNURLED SHC #8
275	4	900172-002	SCREW-FLAT-HEAD, #6-32 X .38
276	28	900160-005	WASHER-FLAT STEEL, #8
277	16	900233-003	NUT-LOCK, #8-32
280	1	900277-004	SPRING-COMPRESSION .75"X.36"X.042"
281	1	900963-002	PLUNGER-SPRING LOADED
282	1	900236-005	SCREW-SOCKET-HEAD, SHOULDER, #8-32 X .6255"
283	5	900224-005	SCREW, TAPTITE, PHILLIPS PANHEAD, #8-32 X .5"
287	8	900235-002	SCREW-SHC, #8-32 X .5"
290	8	900224-001	SCREW, TAPTITE, PHILLIPS PANHEAD, #6-32 X 3/8"
294	2	900928-003	NUT-HEX JAM, 1/4" X 28
295	8	900235-040	SCREW-SHC, #8-32 X 5/8"

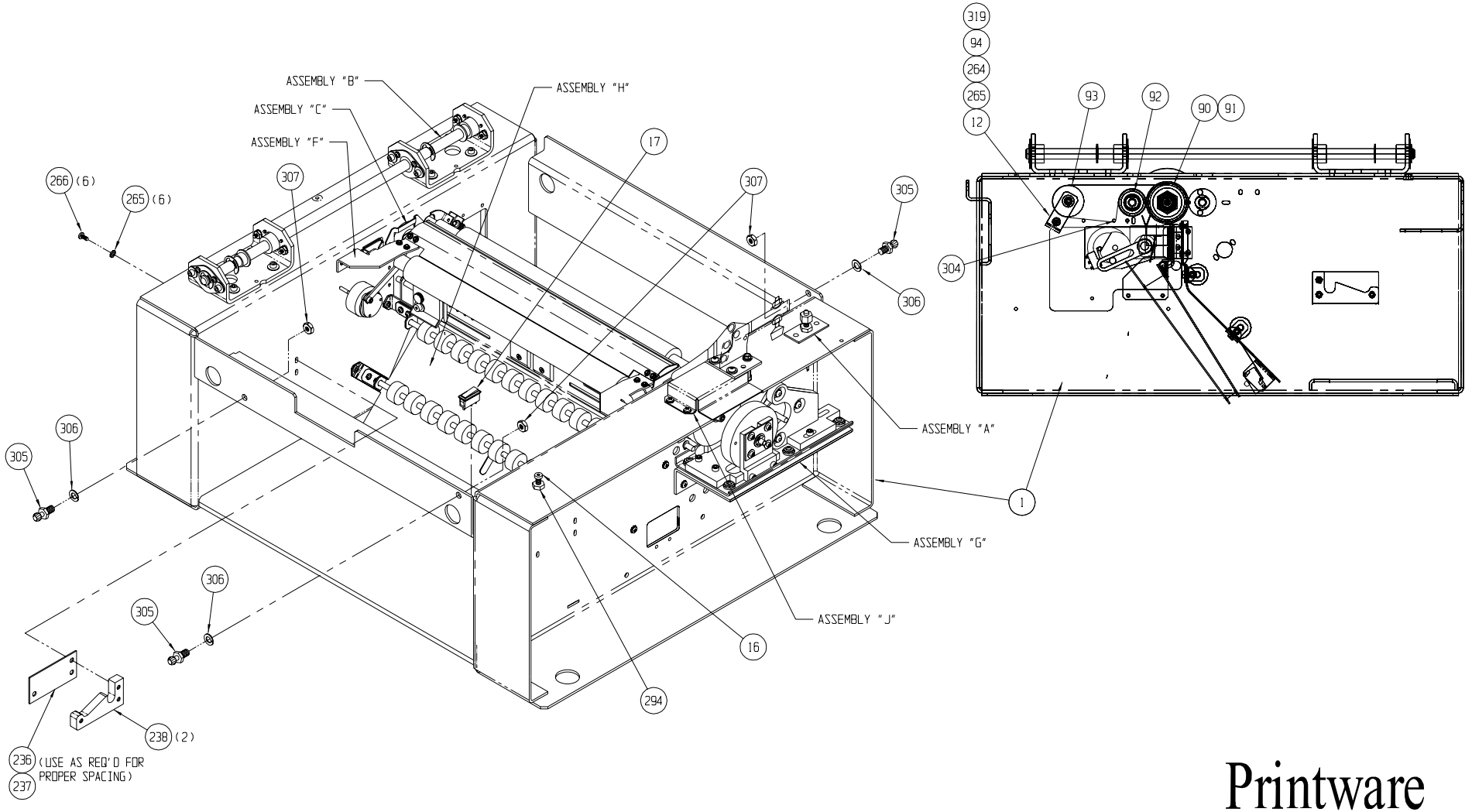
Main Menu

Assembly Number: 808044-001

ASSY-TRANSPORT SMALL COMMERCIAL

Revision: C

297	1	900160-012	WASHER-FLAT, STEEL, #8, NARROW
298	1	900235-041	SCREW-SHC, #8-32 X 1-1/4"
304	1	807014-002	ASSY- IDLER POST, TRACTION CONTROL
305	3	900257	STUD- 10MM, BALL- 5/16"-18
306	3	900223-007	WASHER-LOCK, HELICAL, SPRING, 5/16"
307	3	900222-003	NUT-HEX HEAD UNC 5/16"-18
308	2	900651-019	WASHER-FENDER .434" X .16" X .125"
312	1	807231-001	LABEL-GUIDE/COVER, GUIDE A
315	1	807093-001	LABEL-PLATE GUIDE POSITION
316	1	807093-003	LABEL-PLATE GUIDE POSITION, EDGE GUIDE
317	1	807093-004	LABEL-PLATE GUIDE POSITION, EDGE GUIDE
319	1	807503-001	SPRING-TRACTION CONTROL, 13"
321	1	806099-002	ASSY-SOLENOID-CAPSTAN GUIDE
322	1	806099-001	ASSY-SOLENOID-CAPSTAN GUIDE
323	2	900236-003	SCREW-SOCKET-HEAD, SHOULDER, #8-32 X..125"



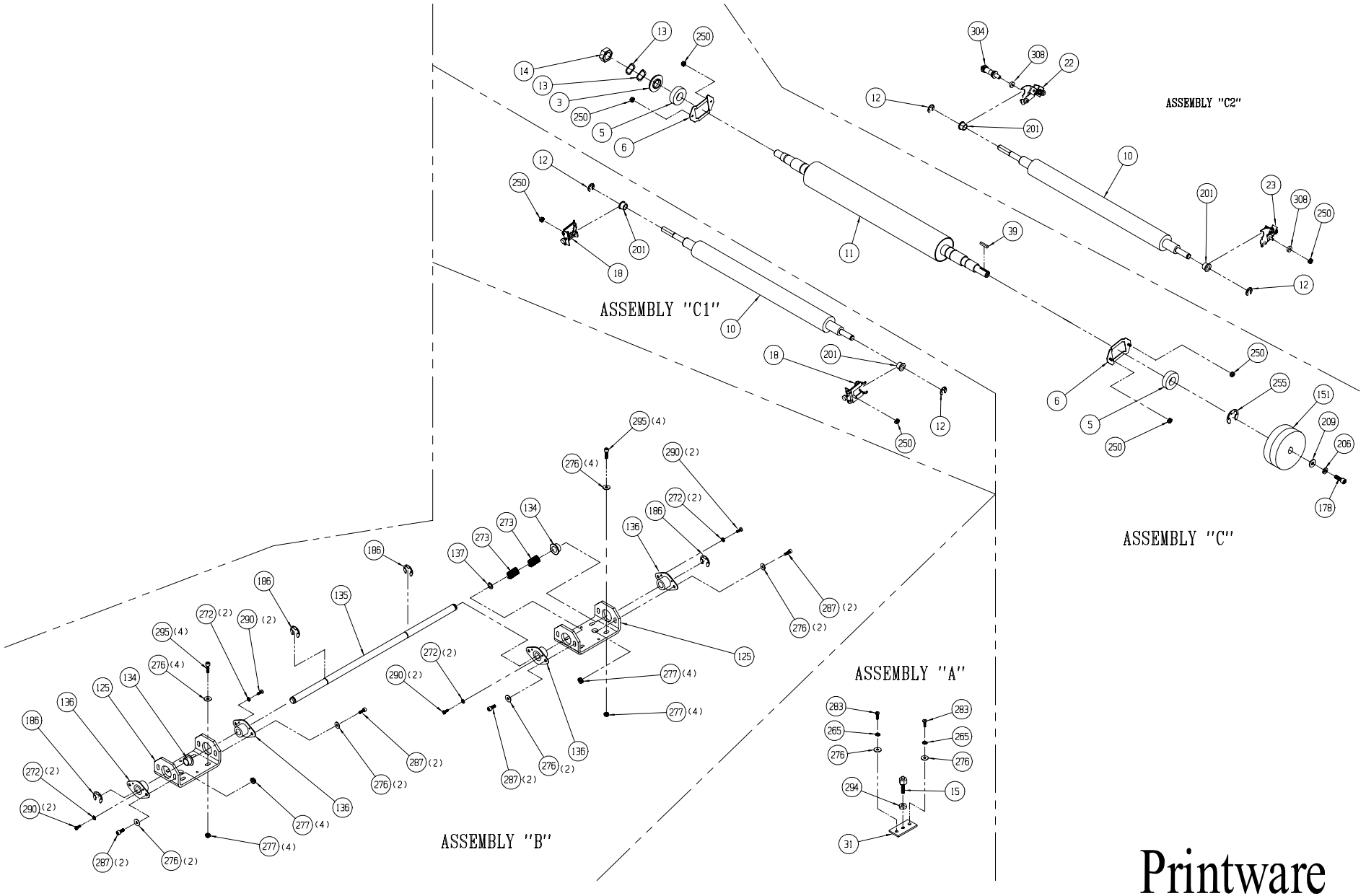
Printware

ASSY-ROLLER TRANSPORT SC

808044-001 REVISION: F

Sheet 1 of 3

Printware Confidential



Printware

ASSY-ROLLER TRANSPORT SC

808044-001 REVISION: F

Sheet 2 of 3

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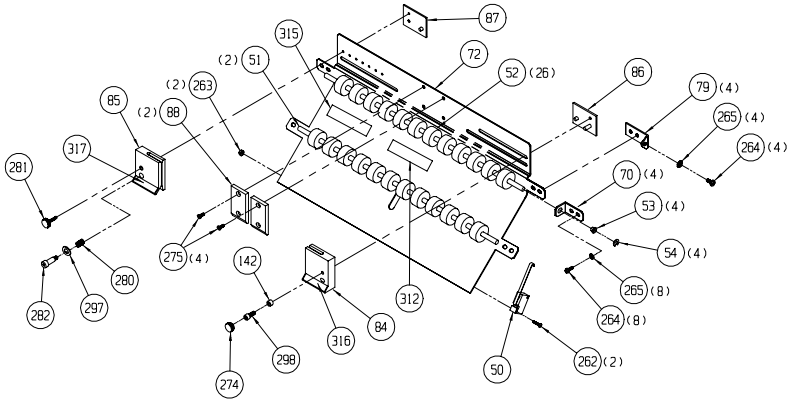

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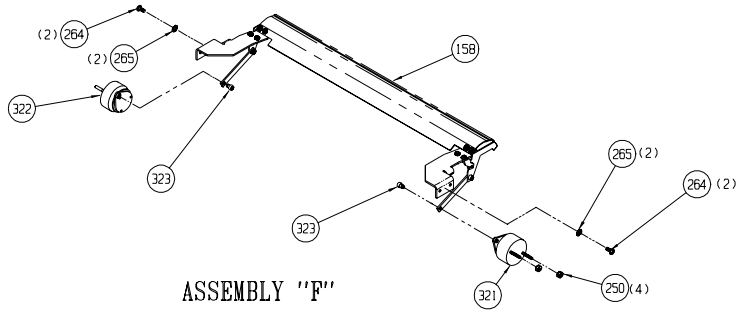

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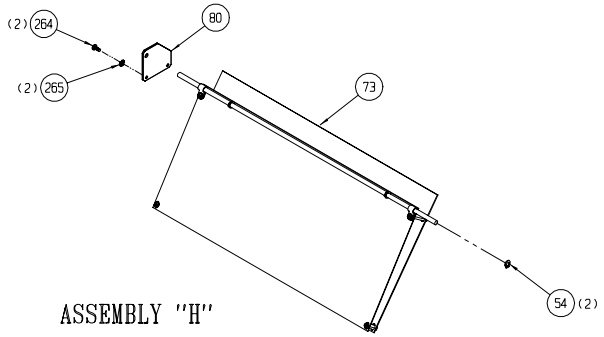

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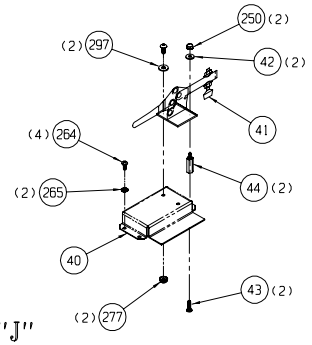

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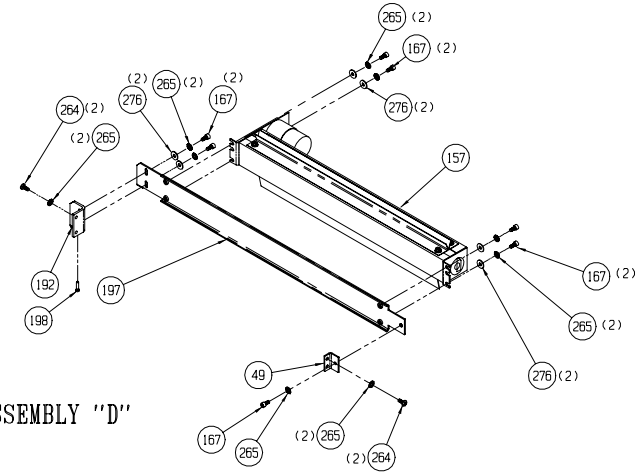

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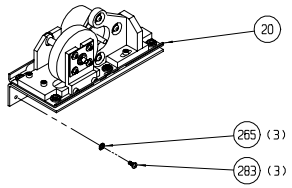
SEE SHEET 1



ASSEMBLY "G"

Printware

ASSY-ROLLER TRANSPORT SC

808044-001 REVISION: F

Sheet 3 of 3

Printware Confidential

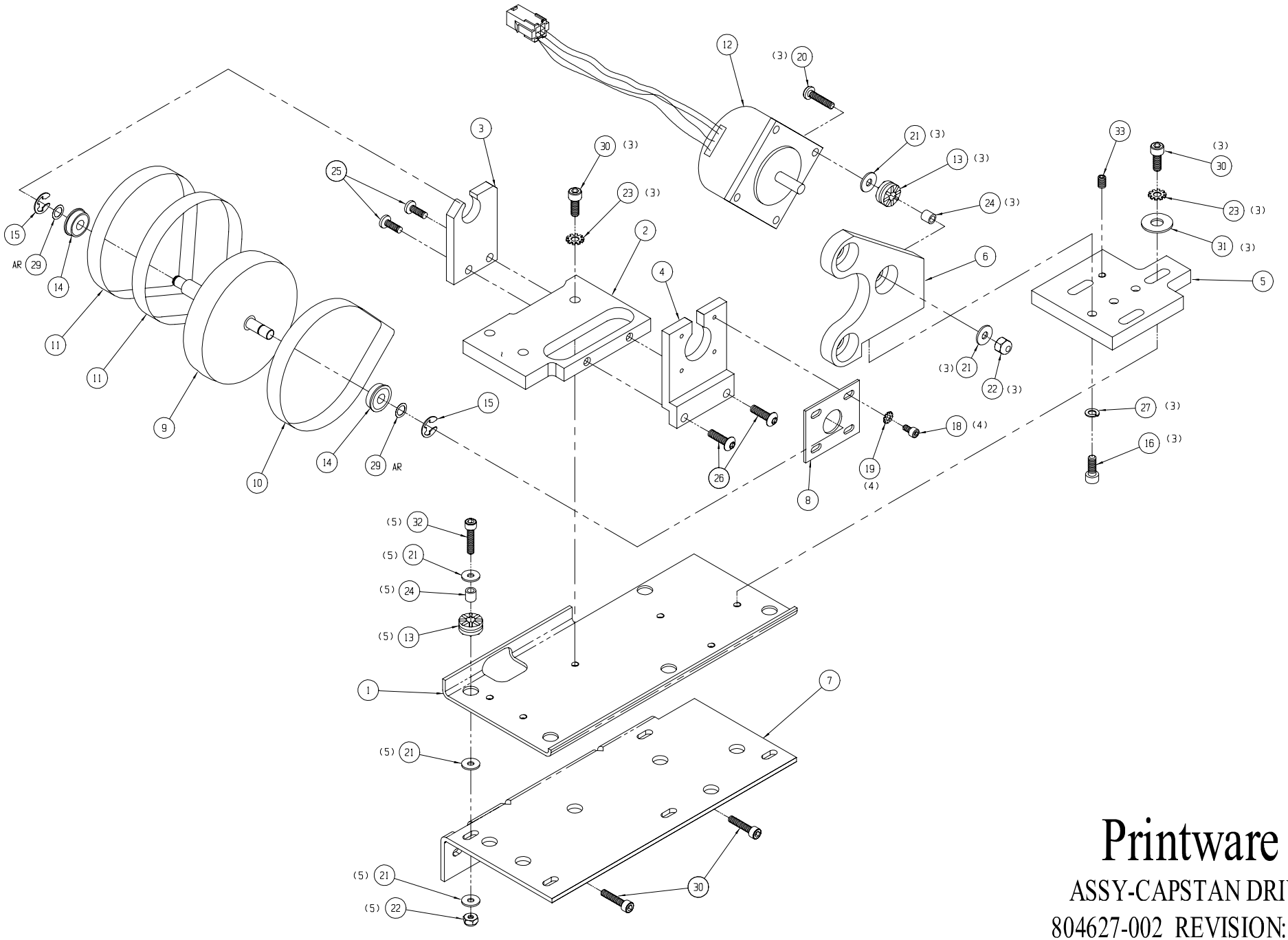
Assembly Number: 804627-002

ASSY-CAPSTAN DRIVE 13"

Revision: N

Find Number	Quantity Used	Component Number	Component Description
001	1	804370-001	PLATE-DRIVE MOUNTING
002	1	804357-001	PLATE-PULLEY MOUNTING BASE
003	1	804356-001	PLATE-PULLEY MOUNTING LEFT SIDE
004	1	804358-001	PLATE-PULLEY MOUNTING RIGHT SIDE
005	1	804355-001	PLATE-MOTOR BRACKET MOUNTING
006	1	804354-001	BRACKET-MOTOR MOUNTING CAPSTAN
007	1	806308-001	BRACKET-CAPSTAN DRIVE MOUNTING
008	1	803391-001	PLATE-CAPSTAN DRIVE BEARING ADJUST
009	1	804359-001	PULLEY-COATED CAPSTAN LOWER
010	1	900800-001	BELT-FLAT
011	2	900781-008	BELT-FLAT 11.5" X .4" X .018"
012	1	804628-001	ASSY-MOTOR-STEPPING
013	8	900767-001	GROMMETS-VIBRATION ISOLATOR
014	2	900296	BEARING-BALL FLANGED
015	2	900229-001	E-RING, SAE, 1/4" SHAFT
016	3	900340	SCREW-SOCKET HEAD CAP #10-32 X 1/2"
018	4	900235-013	SCREW-SHC #6-32 X .25"
019	4	900047-002	WASHER-EXTERNAL LOCK #6
020	3	900287-020	SCREW-PHILLIPS PANHEAD #8-32 X 1"
021	21	900160-005	WASHER-FLAT STEEL #8
022	8	900336-001	NUT-SELF LOCKING HEX #8-32
023	6	900047-003	WASHER-EXTERNAL LOCK #10
024	8	900652-014	SPACER-ROUND #8 X 1/4"
025	2	900288-000	SCREW-PHILLIPS PANHEAD #10-32 X 1/2"
026	2	900445	SCREW-B.H. TORX #10-32 X .625"
027	3	900223-005	WASHER-LOCK HELICAL SPRING #10
029	0	900226-004	SPACER-SHAFT SS3-5
030	8	900340-003	SCREW-SOCKET HEAD CAP UNIT #10-32 X 3/4"
031	3	900160-006	WASHER-FLAT STEEL #10
032	5	900235-000	SCREW-SHC #8-32 X .75"
033	1	901095-005	SCREW-SET OVAL POINT #10-32 X 5/16"

Main Menu



Printware

ASSY-CAPSTAN DRIVE

804627-002 REVISION: N

Sheet 1 of 1

Printware Confidential

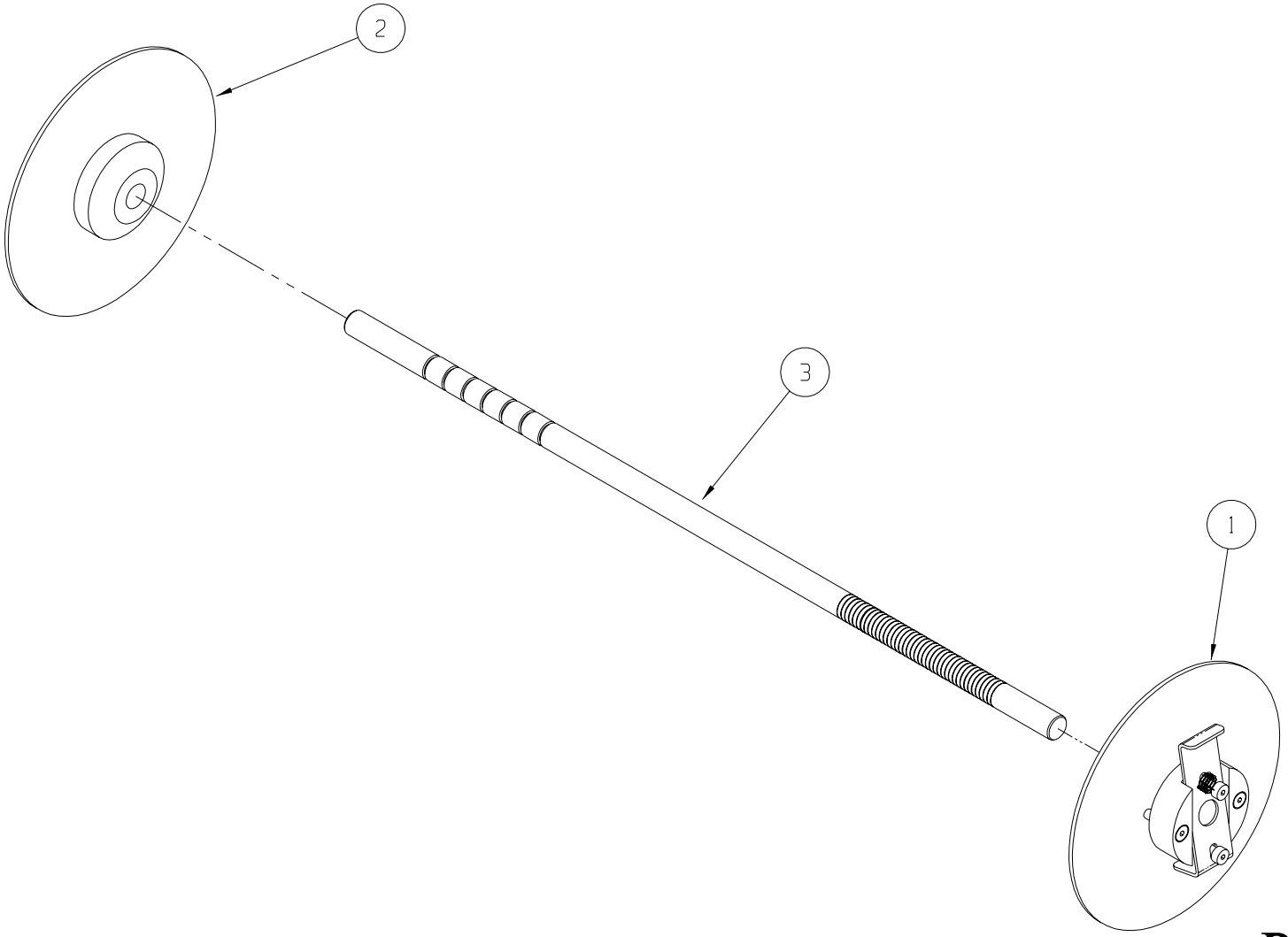
Assembly Number: 807096-001

ASSY-SPOOL 13"

Revision: E

Find Number	Quantity Used	Component Number	Component Description
001	1	806625-002	ASSY-SPOOL PLATE ADJ.
002	1	806626-002	ASSY-SPOOL PLATE FIXED
003	1	807109-001	AXLE-SPOOL

Main Menu



Printware

ASSY-SPOOL

807096-001 REVISION: E

Sheet 1 of 1

Printware Confidential

Assembly Number: 808047-001

ASSY-PROCESSOR PLATESTREAM SC

Revision: B

Find Number	Quantity Used	Component Number	Component Description
001	1	806743-001	PANEL-SUPPORT RACK
002	1	806713-001	ASSY-CLUTCH SHAFT
003	1	900960-005	BEARING-ROLLER
004	1	806733-001	BRACKET-CLUTCH
005	1	806824-001	BEARING-FLANGE MODIFIED
006	1	900289-003	BUSHING-GROMMET
007	1	806786-001	ASSY-TEMPEATURE PROBE ACTIVATOR
009	2	807497-001	ASSY-LEVEL SENSOR
010	1	806710-001	ASSY-DRIVE SHAFT
011	1	806714-001	ASSY-DRYER DRIVE
012	1	807494-001	SUPPORT-UPPER DUCT
013	1	806724-001	RAIL-RIGHT
014	2	806727-001	GUSSET-RAIL DRIVE
015	1	807495-001	FRAME-DRIVE DRYER
016	2	900289-004	BUSHING-GROMMET
017	1	806792-001	ASSY-CABLE P3 TO J14
018	8	900338-001	MOUNT-TIE ANCHOR NYLON
022	1	806769-001	SWITCH-WIRE FORM
023	1	600333-001	SWITCH-SNAP LEVER
024	1	806731-001	DUCT-VERTICAL
025	1	808049-001	ASSY-STABILIZER TRANSPORT SC
026	1	808048-001	ASSY-ACTIVATOR TRANSPORT SC
029	1	806701-001	ASSY-ACTIVATOR TANK
030	1	806702-001	ASSY-STABILIZER TANK
031	1	806725-001	RAIL-LEFT
032	6	900338-002	MOUNT-TIE
033	1	806793-001	ASSY-CABLE ACT/STABILIZER LEVEL
034	1	807204-001	ASSY-CABLE INTERFACE 13"
036	1	600330-001	SENSOR-THERMISTOR DISK
037	1	806831-001	SHIM-SUPPORT RACK PROCESSOR
038	1	806704-001	ASSY-HEATER COVER
039	1	806705-001	ASSY-HEATER BLOWER
040	1	806788-001	ASSY-CABLE DRY TEMPERATURE PROBE
041	1	806789-001	ASSY-CABLE FILM SWITCH
042	1	806790-001	ASSY-CABLE REPLENISHMENT LEVEL
043	1	523200-001	PCA-INTERFACE PROCESSOR
044	1	806708-001	ASSY-ELECTRICAL PANEL
045	1	806703-001	ASSY-DRIVER MOTOR
046	1	900271-003	BELT-TIMING 1/5 PITCH 60 GROVES
047	1	806739-001	PANEL-PCA BOARD
048	8	900967-010	SCREW-STAINLESS 10-24 X .5"
050	1	806750-001	BLOCK-SUPPORT SWITCH

Main Menu

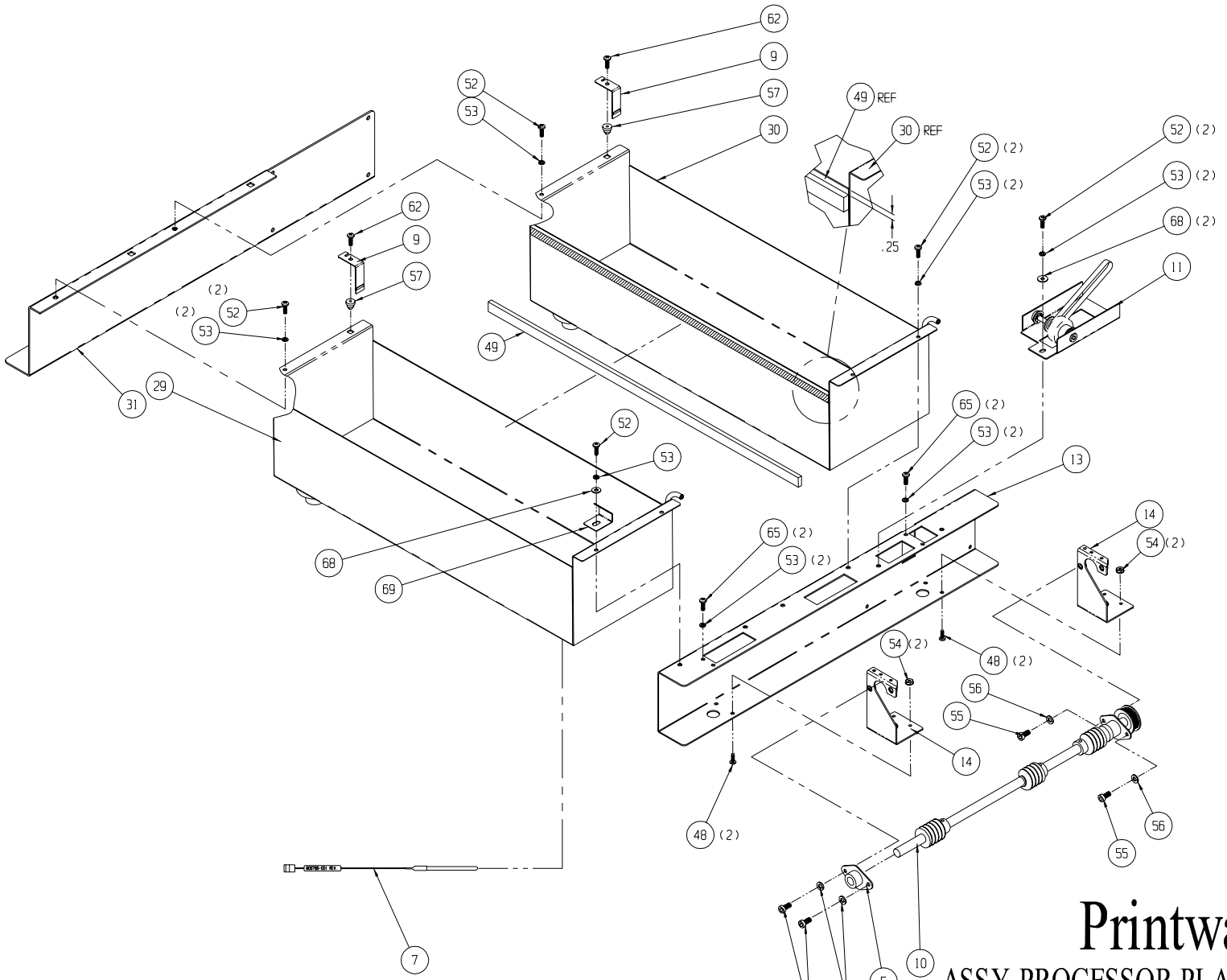
Assembly Number: 808047-001

ASSY-PROCESSOR PLATESTREAM SC

Revision: B

051	6	901089-004	SCREW-STAINLESS TAP/FORM 10-32 X .5"
052	31	900967-003	SCREW-STAINLESS 10-24 X .375" PHILLIPS PANHEAD
053	39	901072-005	WASHER-SPRING LOCK STAINLESS
054	10	900968-005	NUT-STAINLESS 10-24 KEPS LOCKNUT
055	4	900967-006	SCREW-STAINLESS 1/4"-20 TPI X .5"
056	4	901072-006	WASHER-SPRING LOCK STAINLESS
057	2	901092-001	GROMMET-SCREW
059	2	900967-007	SCREW-STAINLESS 4-40 X .625"
060	7	900967-001	SCREW-STAINLESS 8-32 X .375" PHILLIPS PANHEAD
061	6	901071-010	WASHER-FLAT STNLS #8 3/8" X 11/64" X .031"
062	4	900967-005	SCREW-STAINLESS 8-32 X .5" PHILLIPS PANHEAD
063	0	900337-000	GROMMET- EDGE, SLOTTED
064	6	900968-001	NUT-STAINLESS 8-32 KEPS LOCKNUT
065	4	900967-019	SCREW-STAINLESS 10-32 X .5" PILLIPS PANHEAD
066	1	901076-003	WASHER-EXT STAINLESS #8
067	9	901091-001	STANDOFF-TURN
068	8	901071-012	WASHER-FLAT STAINLESS
069	1	807394-001	BRACKET-RACK LOCATING
074	1	807313-002	ASSY-AIR HOOD
075	1	808228-002	ASSY-TRANSPORT DRYER ROLLER FOAM 11
076	1	806848-001	ASSY-CROSSOVER GUIDE
079	1	806657-002	ASSY-RACK COVER
089	2	806706-004	ASSY-TUBE OVERFLOW
102	1	806410-002	BRACKET-PROCESSOR HEATER HEIGHT
103	1	806410-001	BRACKET-PROCESSOR HEATER HEIGHT
106	2	807487-001	BRACKET-COVER ADJUST
107	4	901072-004	WASHER-SPRING LOCK STNLES #8 .055" X .04"

Main Menu



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ASSY-PROCESSOR PLATESTREAM SC

808047-001 REVISION: B

Sheet 1 of 5

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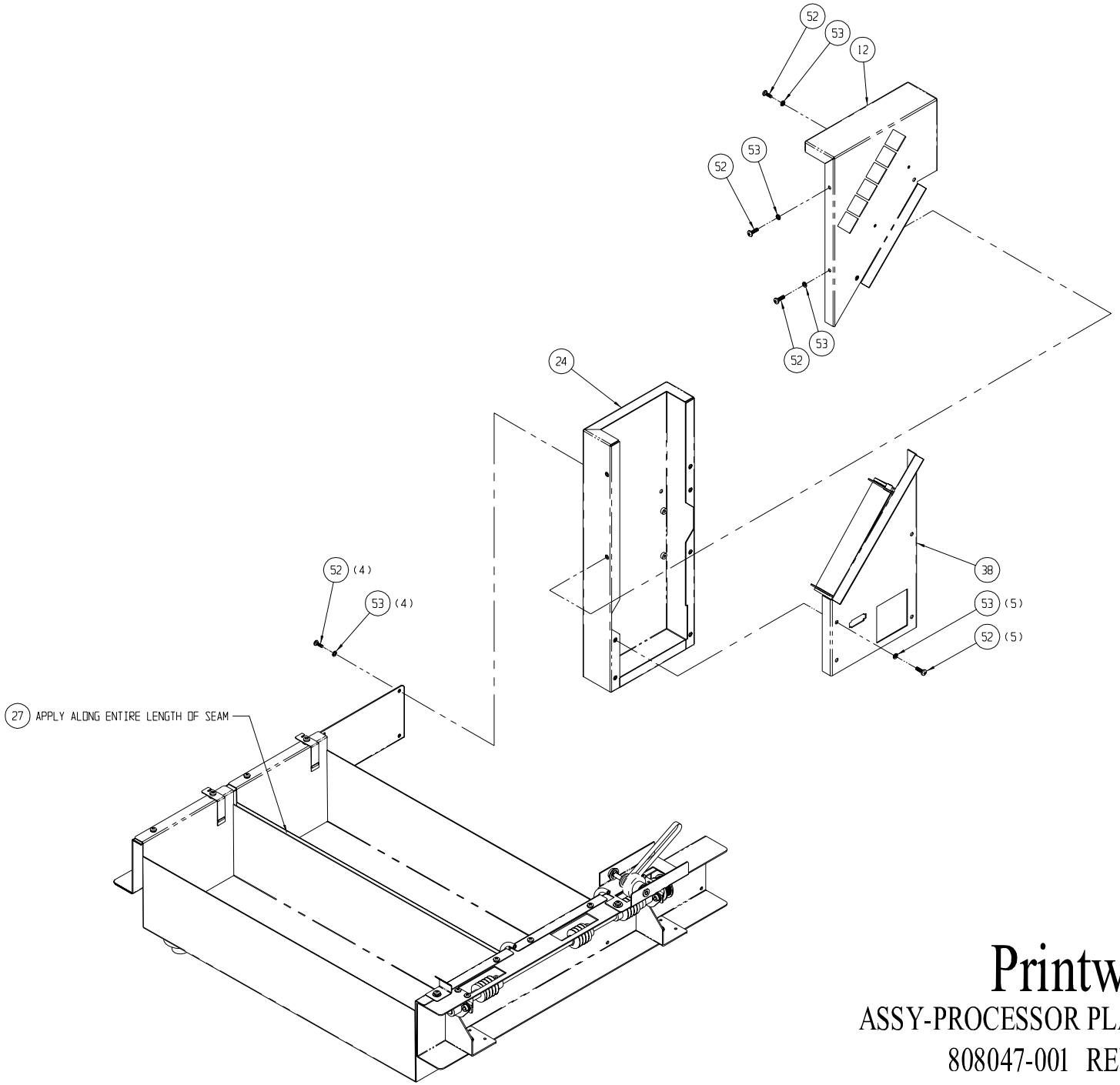

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ASSY-PROCESSOR PLATESTREAM SC

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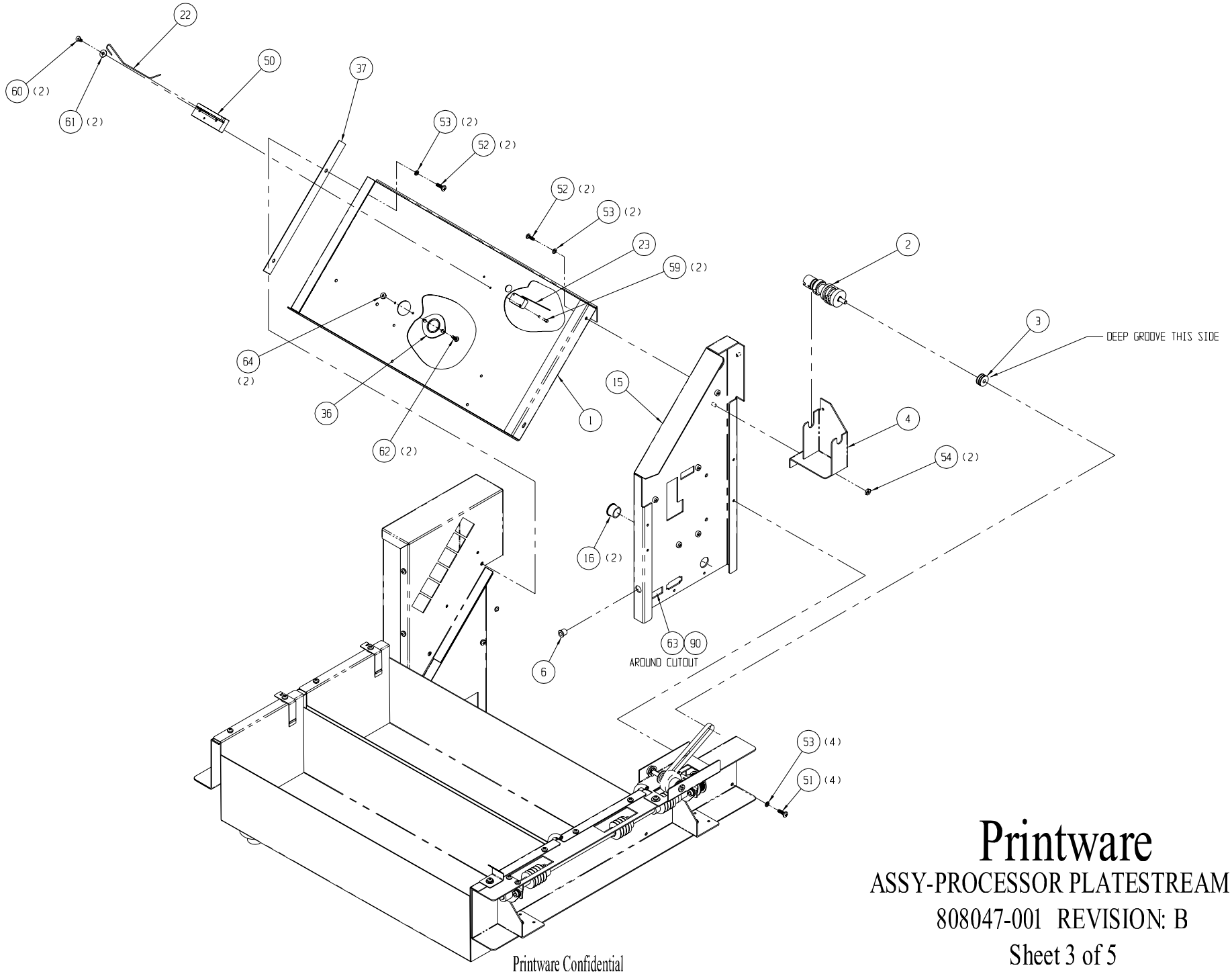

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ASSY-PROCESSOR PLATESTREAM SC

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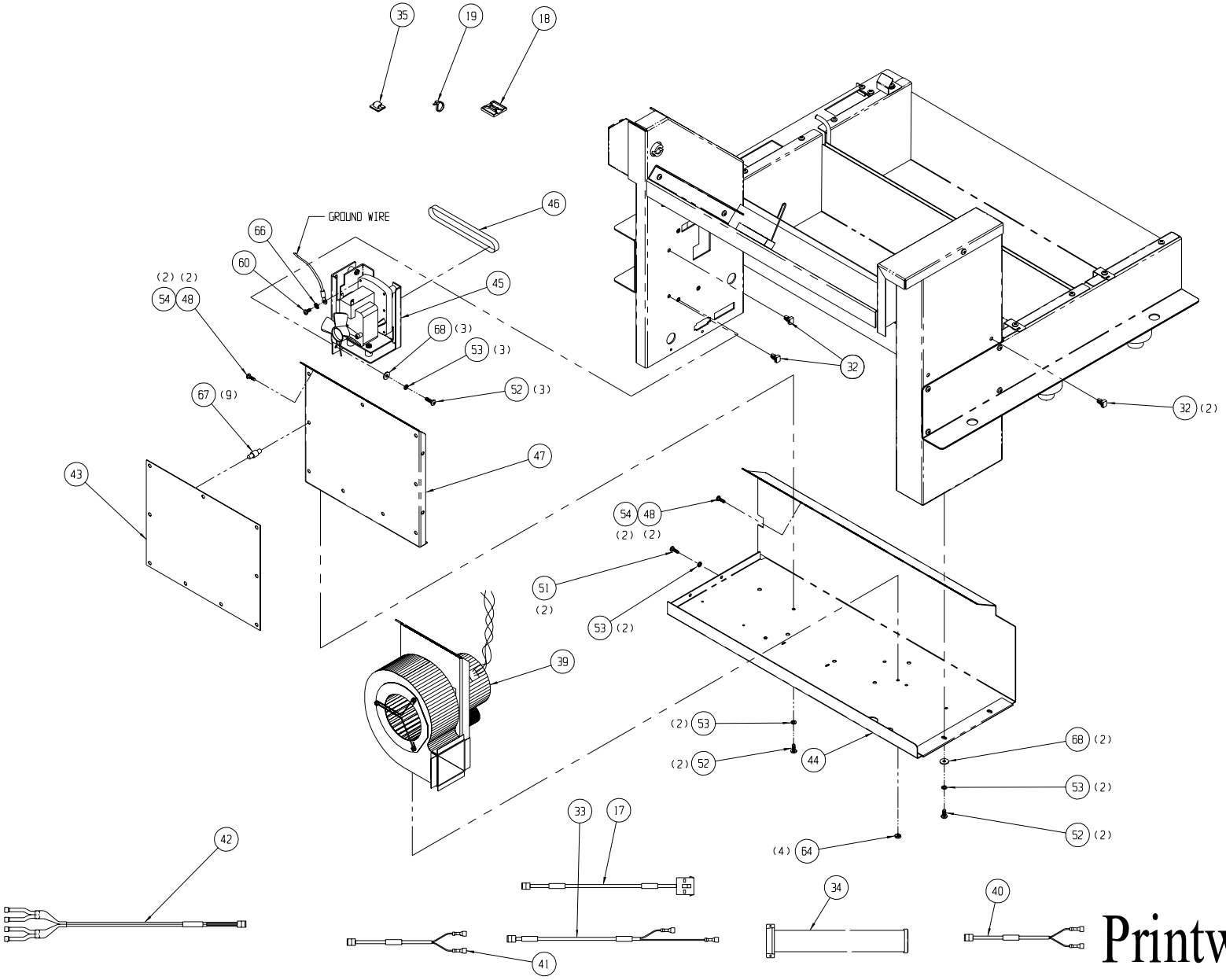

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ASSY-PROCESSOR PLATESTREAM SC

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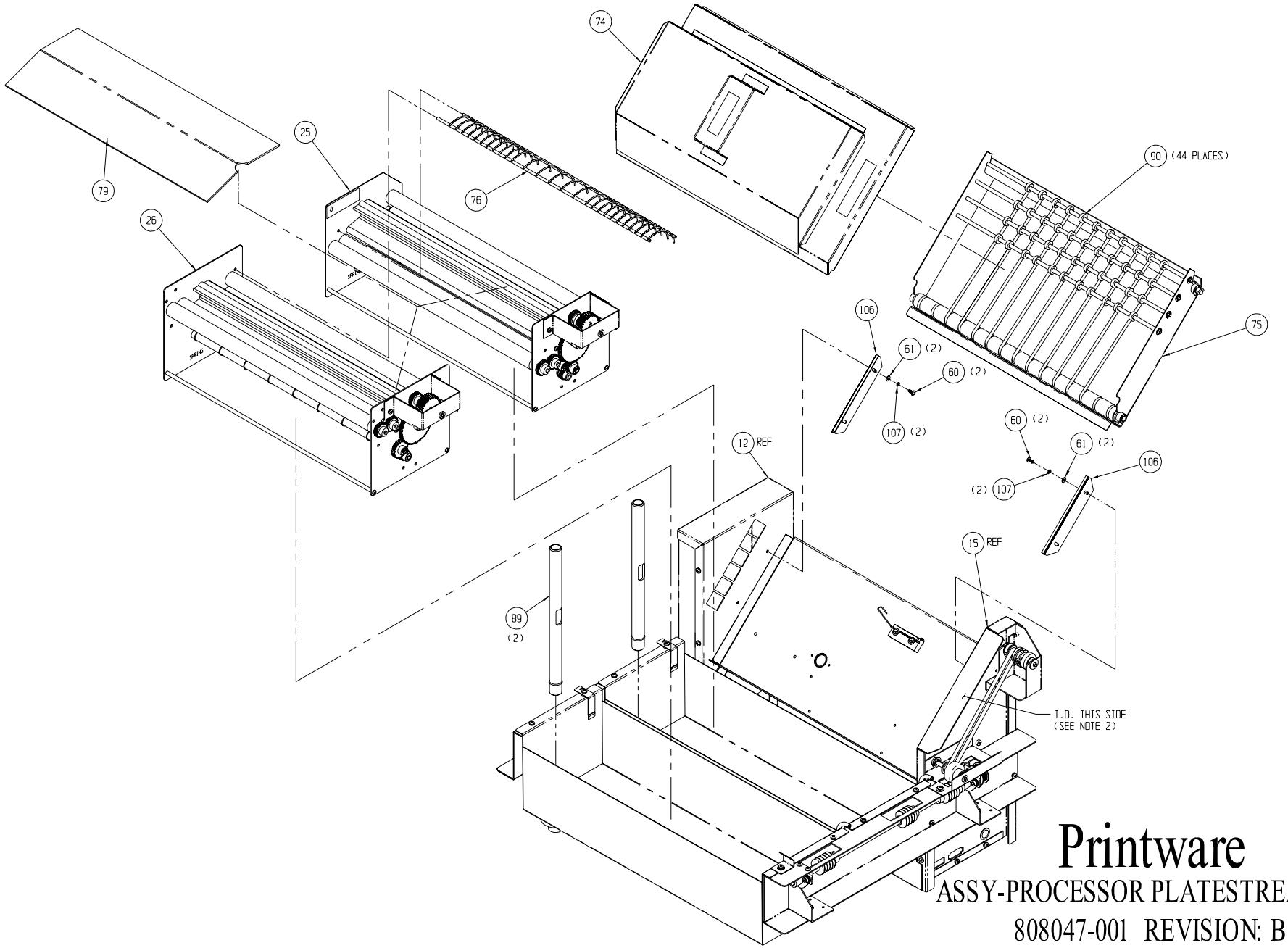

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ASSY-PROCESSOR PLATESTREAM SC

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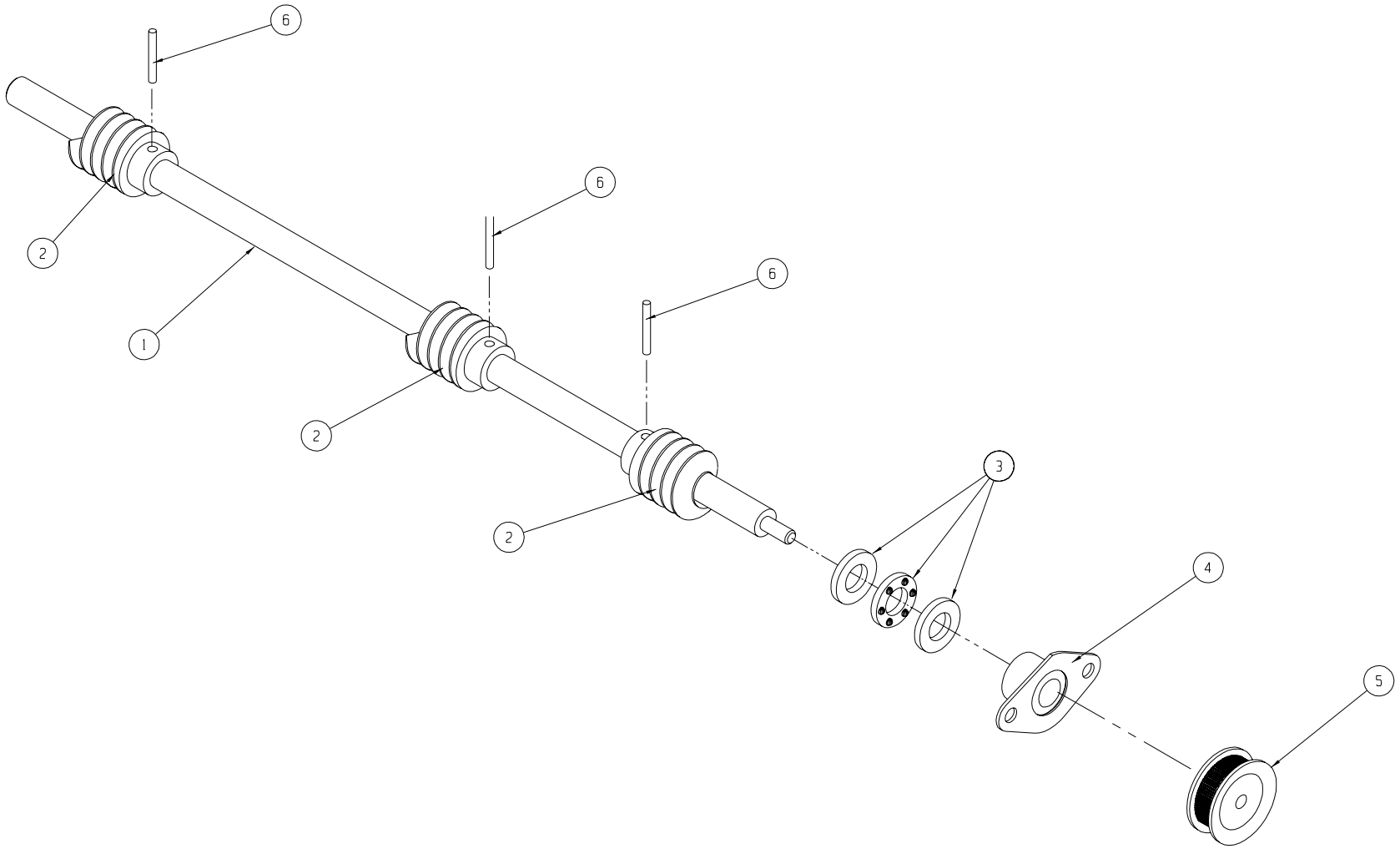
Assembly Number: 806710-001

ASSY-PROCESSOR DRIVE SHAFT

Revision: E

Find Number	Quantity Used	Component Number	Component Description
001	1	806775-001	SHAFT-DRIVE
002	3	900960-019	GEAR-WORM
003	1	901090-001	BEARING-THRUST
004	1	806824-001	BEARING-FLANGE MODIFIED
005	1	900268-005	PULLEY-TIMING BELT 1/5 PITCH
006	3	901079-001	PIN-SPIRAL

Main Menu



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ASSY-PROCESSOR DRIVE SHAFT

806710-001 REVISION: E

Sheet 1 of 1

Printware Confidential

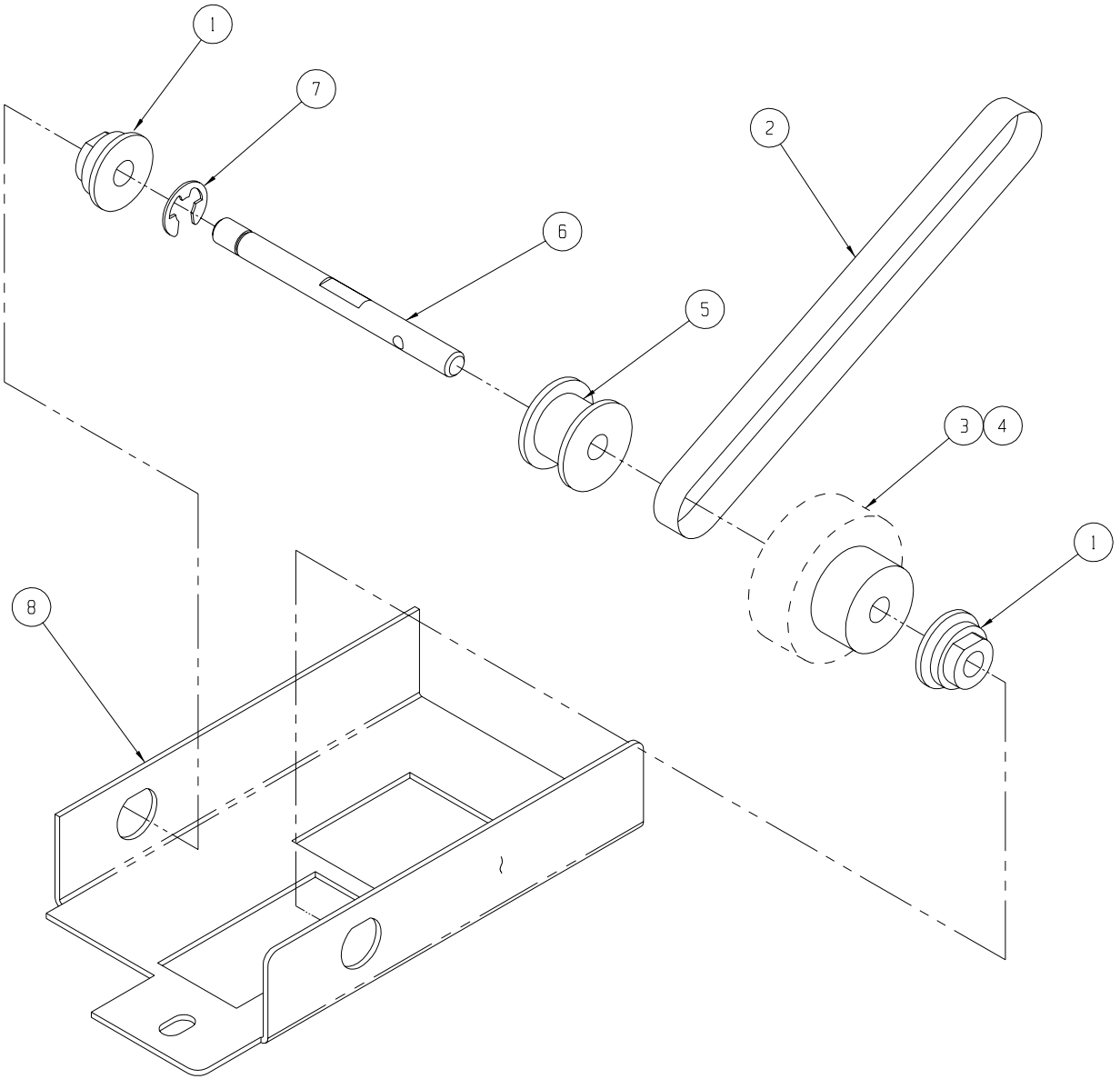
Assembly Number: 806714-001

ASSY-DRYER DRIVE

Revision: G

Find Number	Quantity Used	Component Number	Component Description
001	2	900960-004	BEARING-ROLLER
002	1	900271-004	BELT-TIMING 1/5 PITCH 100 GROOVES
003	1	900960-002	GEAR-WORM SINGLE
004	1	900582-007	PIN-DOWEL SST .125" DIAMETER X .625" LARGE
005	1	900268-008	PULLEY-TIMING BELT 1/5 PITCH
006	1	806770-001	SHAFT-DRIVE BELT
007	1	900229-017	E-RING SAE .25" SHAFT
008	1	806729-001	CHANNEL-DRIVE DRYER

Main Menu



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ASSY-DRYER DRIVE

806714-001 REVISION: G

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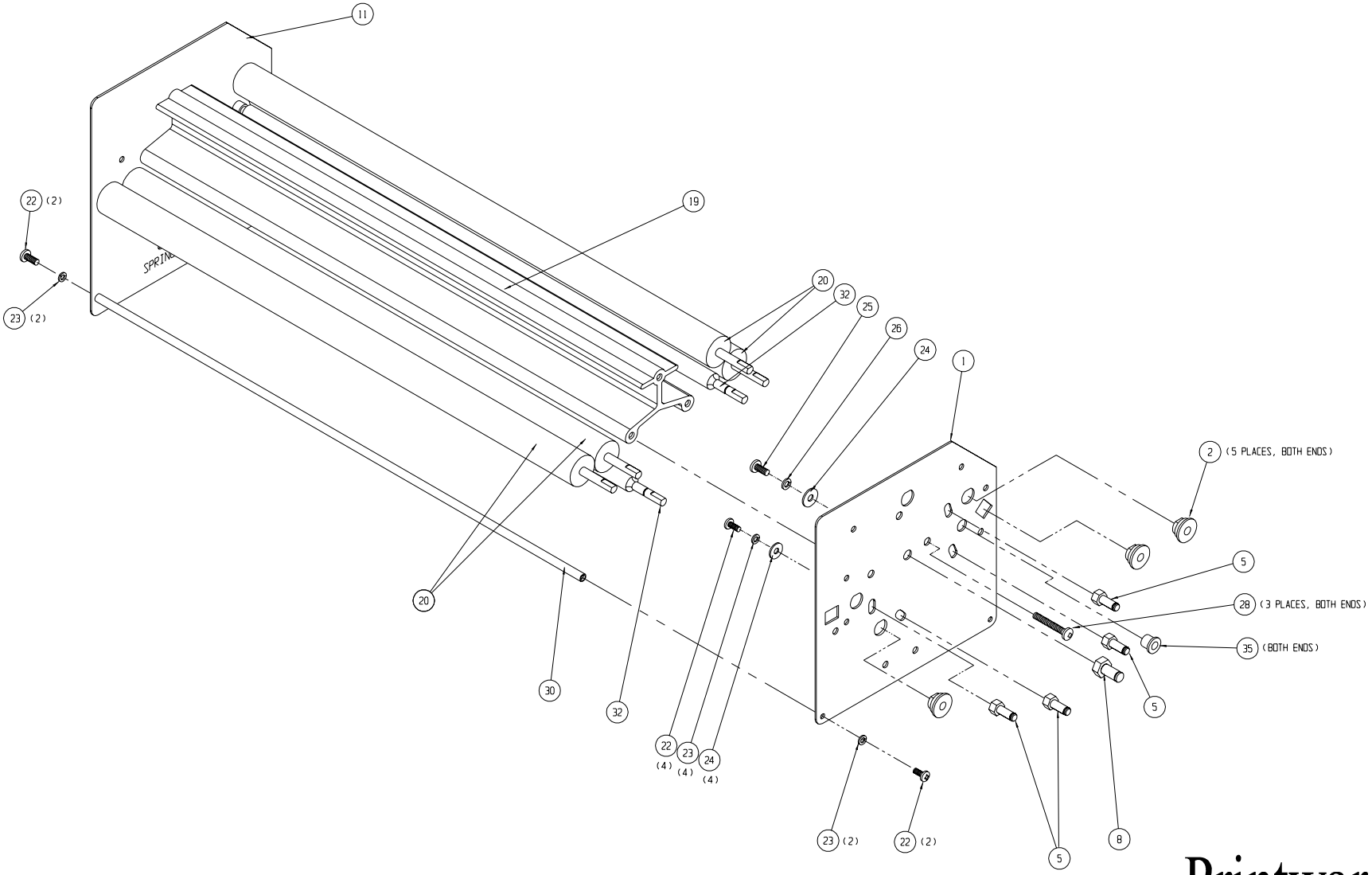
Assembly Number: 808049-001

ASSY-STABILIZER PLATESTREAM SC

Revision: A

Find Number	Quantity Used	Component Number	Component Description
001	1	807331-001	PLATE-STABILIZER FRONT
002	12	900960-004	BEARING-ROLLER
003	5	900960-003	GEAR-ASSY GEAR
005	4	806752-001	SHAFT-IDLER
006	2	900960-001	GEAR-SPUR
007	10	900229-017	E-RING SAE.25" SHAFT
008	1	806776-001	STUD-GEAR
009	1	900960-020	GEAR-SPUR
010	1	900229-018	E-RING SAE .312" SHAFT
011	1	807332-001	PLATE-STABILIZER REAR
012	1	806764-001	BRKT-DRIVE RACK
013	1	900960-002	GEAR-WORM SINGLE
014	1	900582-007	PIN-DOWEL .125" DIAMETER X .625" LONG
015	1	806821-001	SHAFT-DRIVE RACK
016	1	806837-001	ASSY-STABILIZER ENTRANCE GUIDE
018	2	806762-001	ROLLER-TRANSPORT
019	1	806760-001	HANDLE-RACK
020	2	806278-001	ROLLER-SQUEEGEE POLISHED
021	1	806836-001	ASSY-PROCESSOR GUIDE
022	8	900967-001	SCREW-STAINLESS 8-32 X .375" PHILLIPS PANHEAD
023	8	901072-004	WASHER-SPRING LOCK STAINLESS #8 .055" X .04"
024	5	901071-013	WASHER-FLAT STAINLESS #10 7/16" X 13/64" X .062"
025	3	900967-003	SCREW-STAINLESS 10-24 X .375" PILLIPS PANHEAD
026	1	901072-005	WASHER-SPRING LOCK STAINLESS
028	6	901089-001	SCREW-STAINLESS TAP/FORM 10-24 X 1"
030	2	806822-001	ROD-SUPPORT
031	4	806694-002	SPRING-EXTENSION
032	2	806510-001	ROLLER-PROCESSOR ASSIST
033	2	901070-001	SCREW-SET STAINLESS 8-32 X .25"
034	2	806819-001	GEAR-MOD
035	2	900319-004	BEARING-NON METALLIC FLANGED
036	1	807231-007	LABEL-GUIDE/COVER (GUIDE F)
037	2	806695-001	COLLAR-GEAR
038	2	900773-001	COLLAR-SHAFT
039	2	900968-005	NUT-STAINLESS 10-24 KEPS LOCKNUT
040	15	900215-007	WASHER-NYLON 1/4" X .5" O.D. X .032" THICK
041	1	807225-005	LABEL-STABILIZER

Main Menu



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ASSY-STABILIZER TRANSPORT

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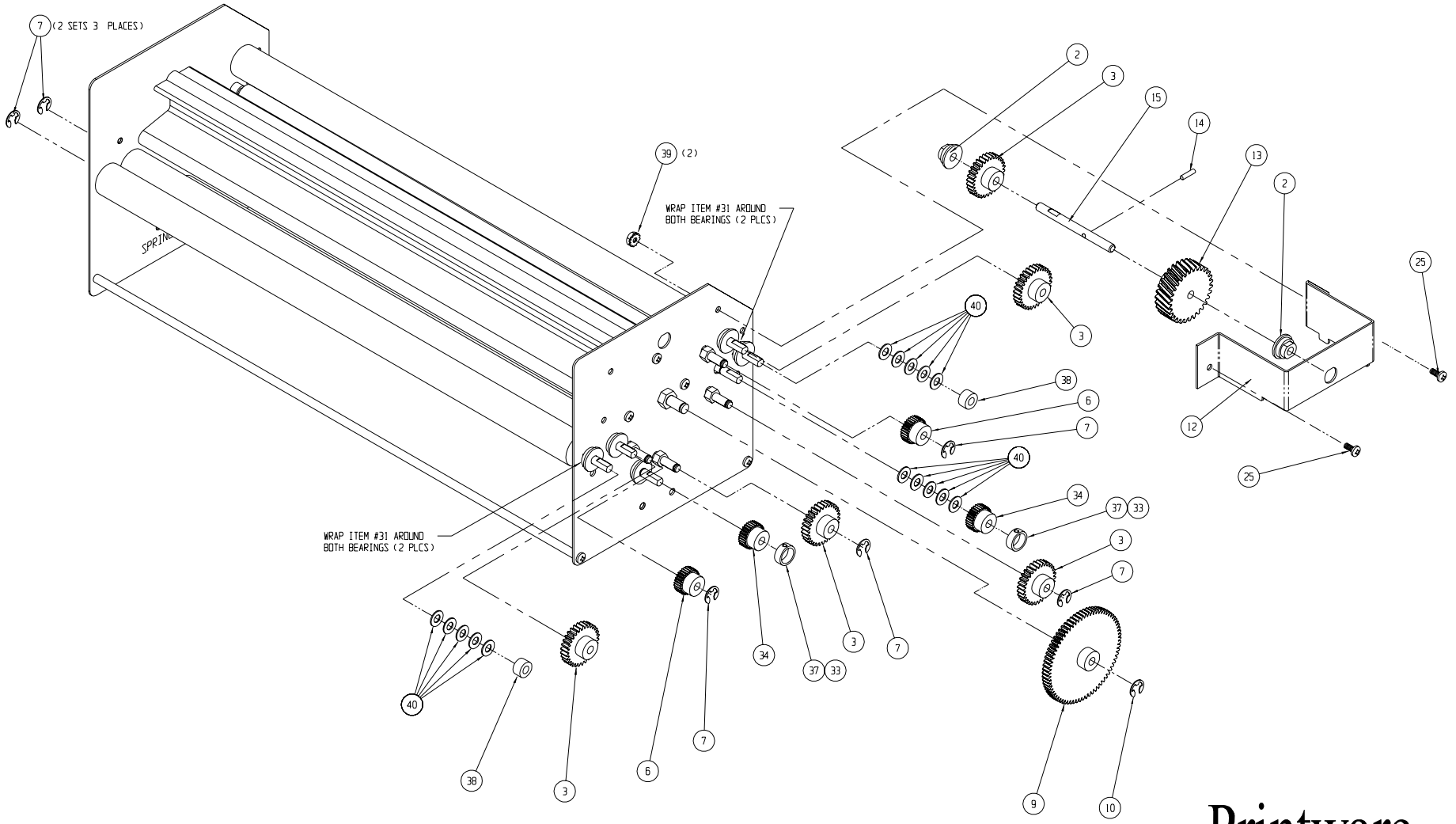

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ASSY-STABILIZER TRANSPORT

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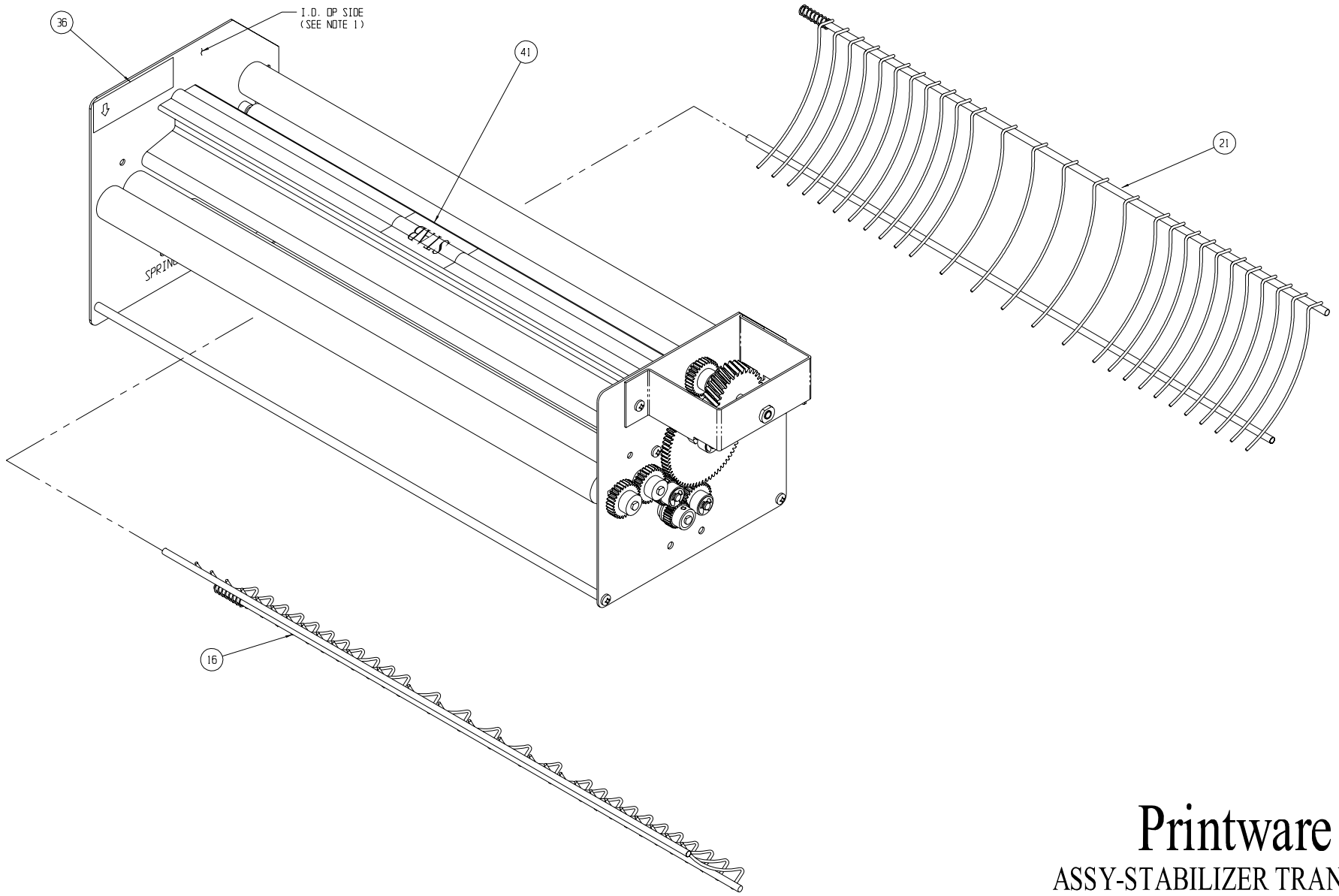

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ASSY-STABILIZER TRANSPORT

808049-001 REVISION: A

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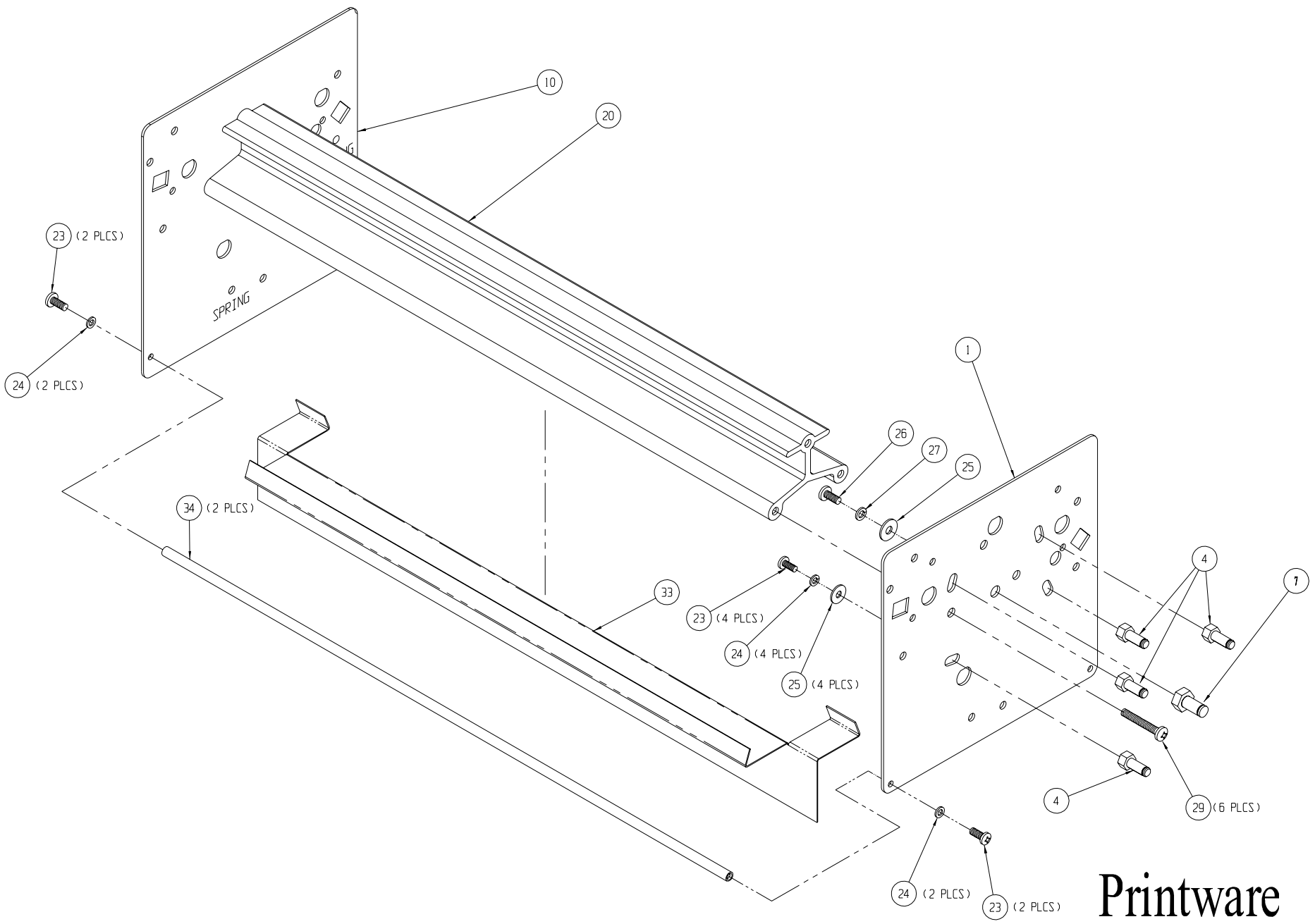
Assembly Number: 808048-001

ASSY-ACTIVATOR PLATESTREAM SC

Revision: A

Find Number	Quantity Used	Component Number	Component Description
001	1	807329-001	PLATE-ACTIVATOR FRONT
002	12	900960-004	BEARING-ROLLER
003	6	900960-003	GEAR-ASSY GEAR
004	4	806752-001	SHAFT-IDLER
005	2	900960-001	GEAR-SPUR
006	10	900229-017	E-RING SAE .25" SHAFT
007	1	806776-001	STUD-GEAR
008	1	900960-020	GEAR-SPUR
009	1	900229-018	E-RING SAE.312" SHAFT
010	1	807330-001	PLATE-ACTIVATOR REAR
011	4	806694-001	SPRING-EXTENSION
012	1	806764-001	BRACKET-DRIVE RACK
013	1	900960-002	GEAR-WORM SINGLE
014	1	900582-007	PIN-DOWEL .125" DIAMETER X .625" LONG
015	1	806821-001	SHAFT-DRIVE RACK
016	2	806836-001	ASSY-PROCESSOR GUIDE
020	1	806760-001	HANDLE-RACK
021	3	806762-001	ROLLER-TRANSPORT
022	8	900291-010	O-RING
023	8	900967-001	SCREW-STAINLESS 8-32 X .375" PHILLIPS PANHEAD
024	8	901072-004	WASHER-SPRING LOCK STAINLESS #8 .055" X .04"
025	5	901071-013	WASHER-FLAT STAINLESS #10 7/16" X 13/64" X .062"
026	3	900967-003	SCREW-STAINLESS 10-24 X .375" PHILLIPS PANHEAD
027	1	901072-005	WASHER-SPRING LOCK STAINLESS
029	6	901089-001	SCREW-STAINLESS TAP/FORM 10-24 X 1"
031	1	806278-001	ROLLER-SQUEEGEE POLISHED
032	2	806510-001	ROLLER-PROCESSOR ASSIST
033	1	806506-001	GUARD-PROCESSOR SPLASH
034	2	806822-001	ROD-SUPPORT
035	2	900319-004	BEARING-NON METALLIC FLANGED
036	2	901070-001	SCREW-SET STAINLESS 8-32 X .25"
037	2	806819-001	GEAR-MOD
038	2	806695-001	COLLAR-GEAR
039	1	900773-001	COLLAR-SHAFT
040	2	900968-005	NUT-STAINLESS 10-24 KEPS LOCKNUT
041	10	900215-007	WASHER-NYLON 1/4" X .5" O.D. X .032" THICK
042	1	807225-004	LABEL-ACTIVATOR

Main Menu



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ASSY-ACTIVATOR TRANSPORT

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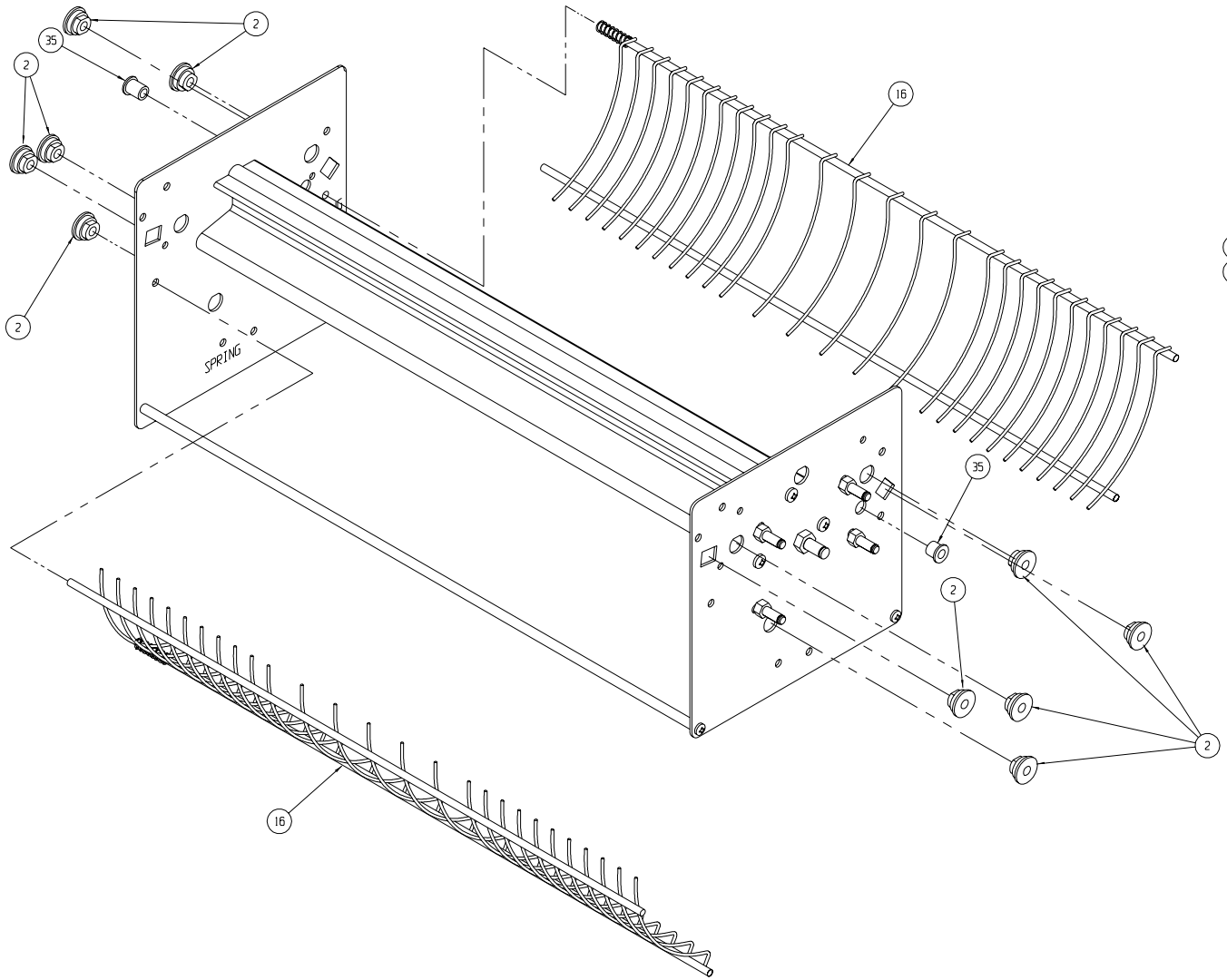

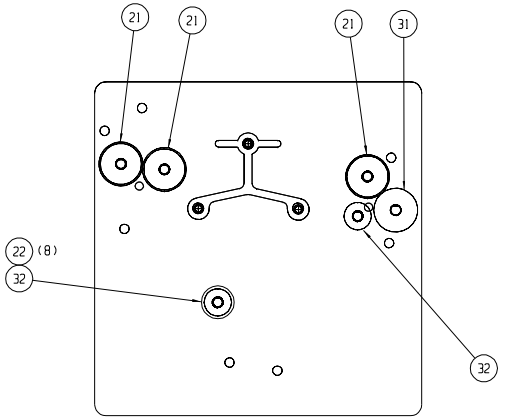

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ASSY-ACTIVATOR TRANSPORT

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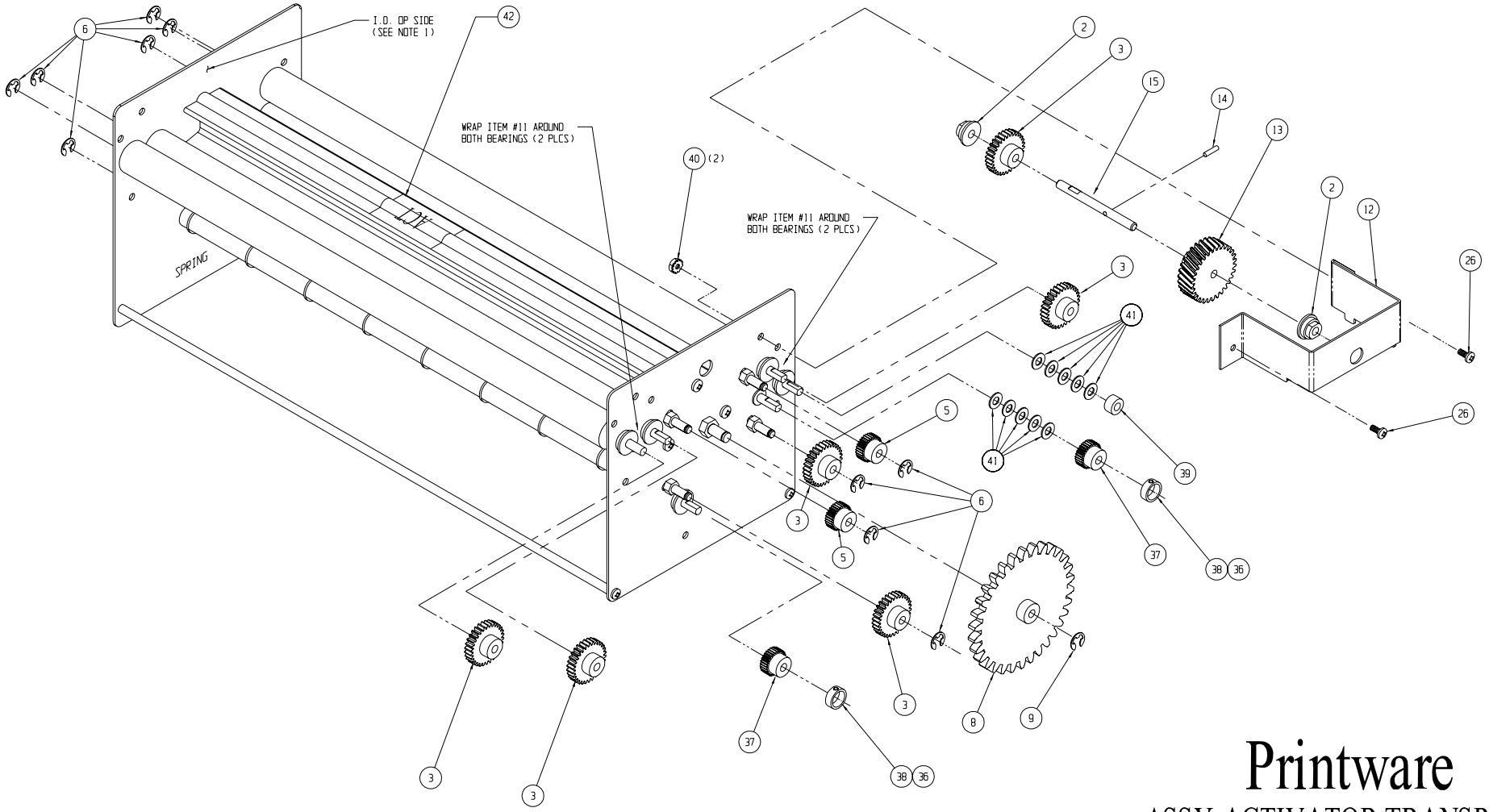

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ASSY-ACTIVATOR TRANSPORT

808048-001 REVISION: A

Sheet 3 of 3

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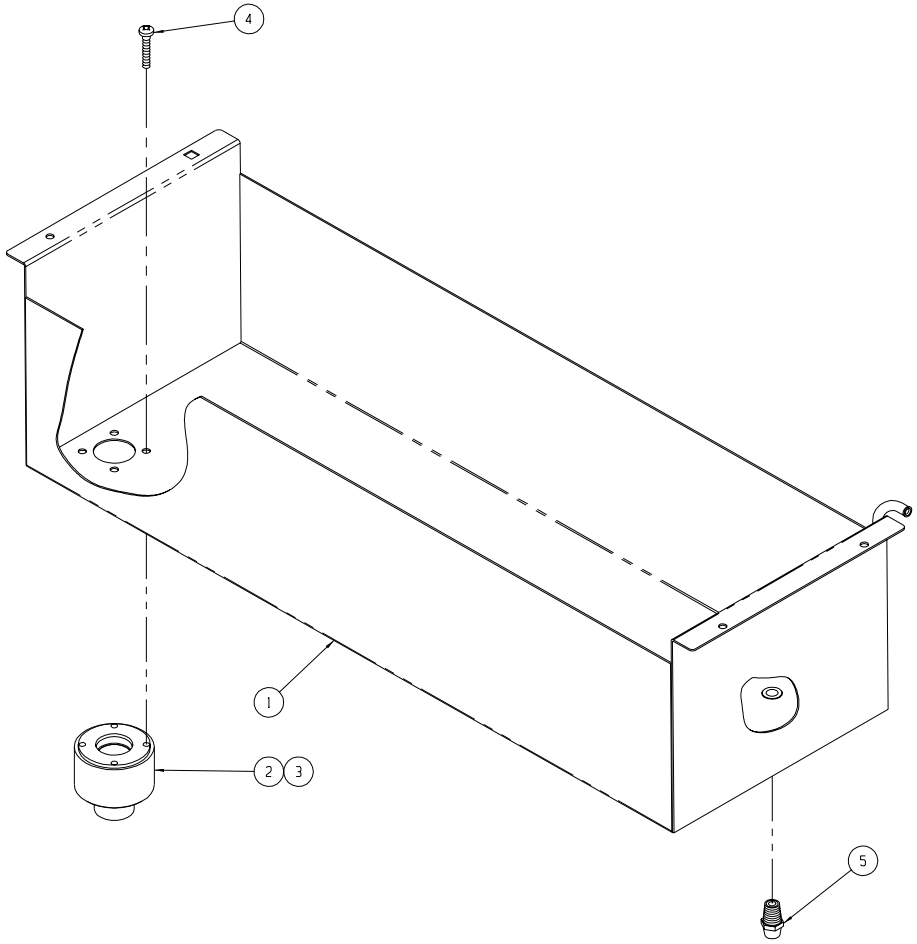
Assembly Number: 806701-001

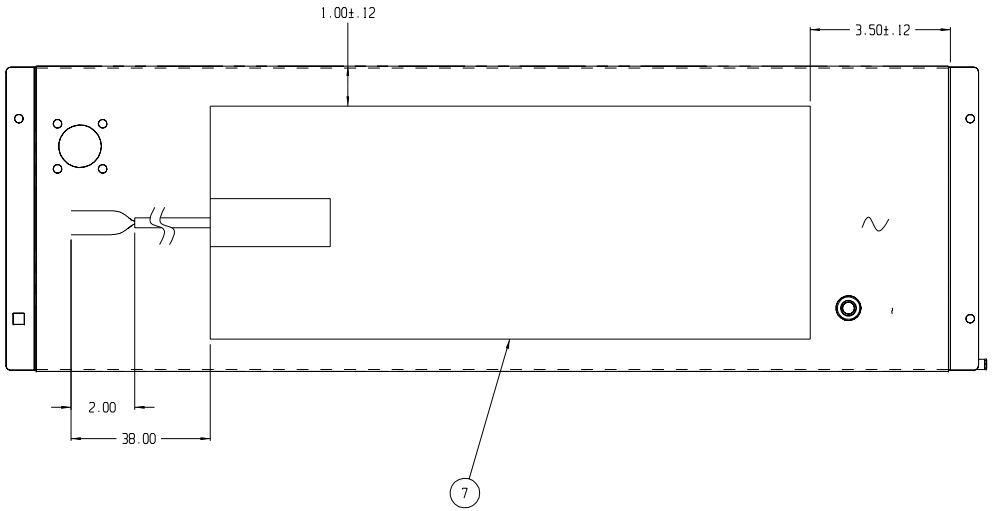
ASSY-ACTIVATOR TANK

Revision: D

Find Number	Quantity Used	Component Number	Component Description
001	1	806735-001	TANK-ACTIVATOR
002	1	806774-001	FITTING-DRAIN
003	1	900291-009	O-RING
004	4	901089-003	SCREW-STAINLESS TAP/FORM 10-24 X .75"
005	1	901083-001	FITTING-COMPRESSION
007	1	600335-001	HEATER-BLANKET

Main Menu





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ASSY-ACTIVATOR TANK

806701-001 REVISION: D

Sheet 1 of 1

Printware Confidential

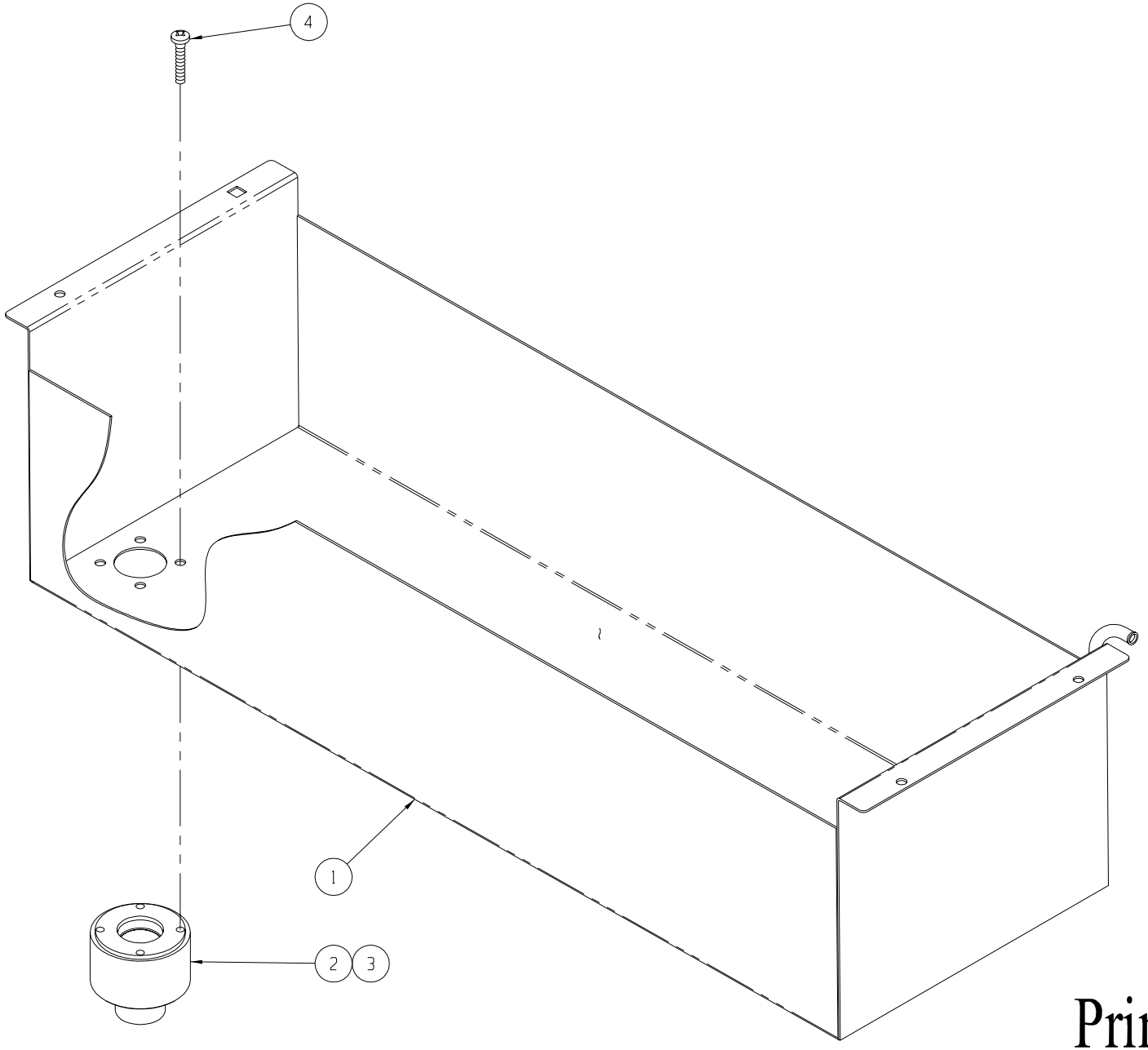
Assembly Number: 806702-001

ASSY-STABILIZER TANK

Revision: C

Find Number	Quantity Used	Component Number	Component Description
001	1	806734-001	TANK-STABILIZER
002	1	806774-001	FITTING-DRAIN
003	1	900291-009	O-RING
004	4	901089-003	SCREW-STAINLESS TAP/FORM 10-24 X .75"

Main Menu



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ASSY-STABILIZER TANK

806702-001 REVISION: C

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Printware Confidential

Assembly Number: 806708-001

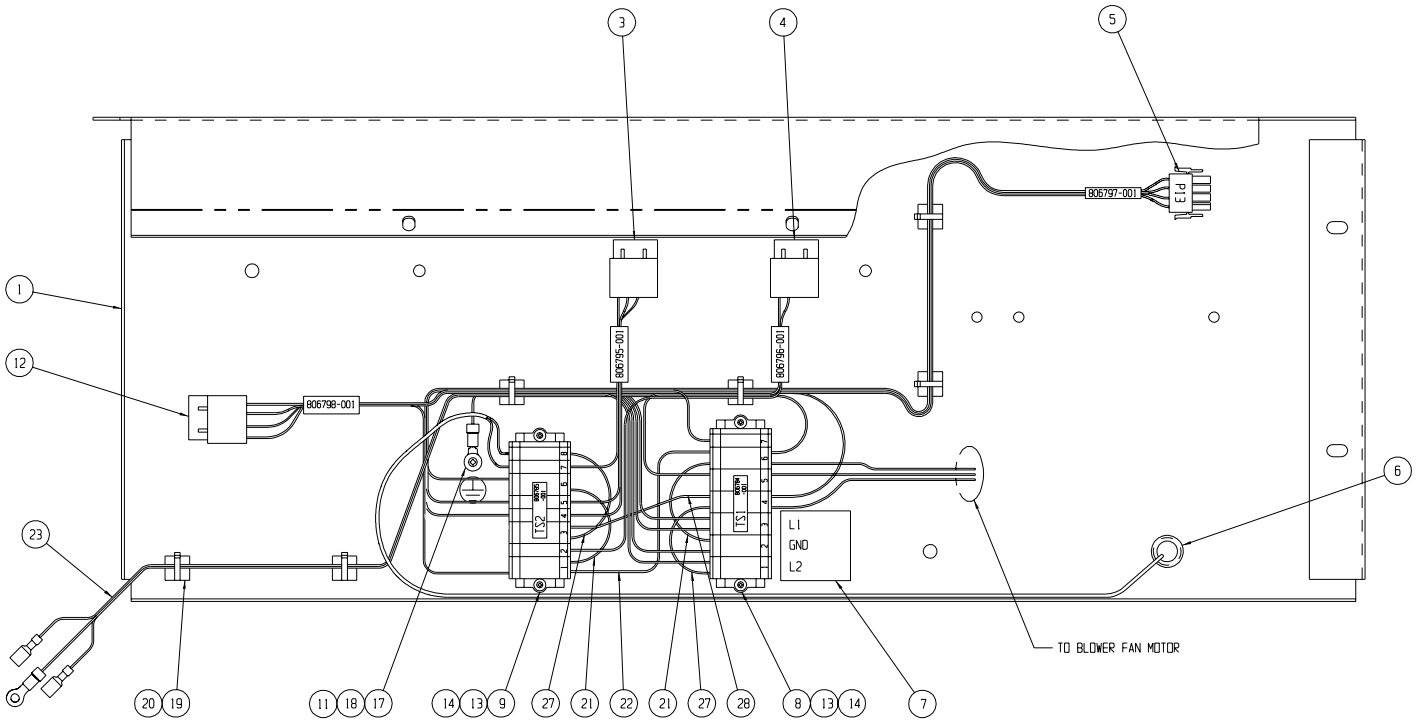
ASSY-ELECTRICAL PANEL

Revision: F

Find Number	Quantity Used	Component Number	Component Description
001	1	806736-001	PANEL-ELECTRICAL LOWER
002	3	900040-003	CLIP-CORD ADHESIVE
003	1	806795-001	ASSY-CABLE HEATER CONTROL
004	1	806796-001	ASSY-CABLE MOTOR CONTROL
005	1	806797-001	ASSY-CABLE DRYER HEATER
006	1	900289-003	BUSHING-GROMMET
007	1	806810-001	LABEL-POWER SUPPLY
008	1	806782-001	ASSY-STRIP TS1
009	1	806783-001	ASSY-STRIP TS2
011	1	806826-001	ASSY-CABLE GROUND
012	1	806798-001	ASSY-CABLE POWER CONTROL
013	4	900967-004	SCREW-STAINLESS 4-40 X .375"
014	4	900968-003	NUT-STAINLESS 4-40 X HEX LOCKNUT
017	1	900967-005	SCREW-STAINLESS 8-32 X .5" PHILLIPS PANHEAD
018	1	901076-003	WASHER-STAINLESS #8
019	8	900338-002	MOUNT-TIE
021	2	806827-001	ASSY-CABLE JUMPER 3.5"
022	1	806827-002	ASSY-CABLE JUMPER 4.5"
023	1	806830-001	ASSY-CABLE PROCESSOR MOTOR
027	2	806827-003	ASSY-CABLE JUMPER 3.5"
028	1	806827-004	ASSY-CABLE JUMPER 3.75"

Main Menu

TO	FROM	REFERENCE
TS1-1	P8-1	----
TS1-1	TS1-4	806827-003 (ITEM 27)
TS1-2	GND-1	806826-001 (ITEM 11)
TS1-2	TS1-6	806827-001 (ITEM 21)
TS1-3	P8-3	----
TS1-3	P8-4	----
TS1-4	TS2-3	806827-004 (ITEM 28)
TS1-4	DRIVE MOTOR	806830-001 (ITEM 23)
TS1-4	BLOWER FAN MOTOR	BLACK
TS1-5	P5-1	----
TS1-5	BLOWER FAN MOTOR	BLACK
TS1-6	TS2-1	806827-002 (ITEM 22)
TS1-6	DRIVE MOTOR	806830-001 (ITEM 23)
TS1-6	BLOWER FAN MOTOR	GREEN/YELLOW
TS1-7	DRIVE MOTOR	806830-001 (ITEM 23)
TS2-1	P8-2	----
TS2-1	TS2-6	806827-001 (ITEM 21)
TS2-2	P5-2	----
TS2-3	TS2-8	806827-003 (ITEM 27)
TS2-3	P13-1	----
TS2-4	P13-2	----
TS2-4	P4-2	----
TS2-5	P13-3	----
TS2-5	P4-3	----
TS2-6	P13-4	----
TS2-7	P4-1	----
TS2-7	ACT TANK HEATER	----
TS2-8	ACT TANK HEATER	----



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ASSY-ELECTRICAL PANEL

806708-001 REVISION:F

Sheet 1 of 1

Printware Confidential

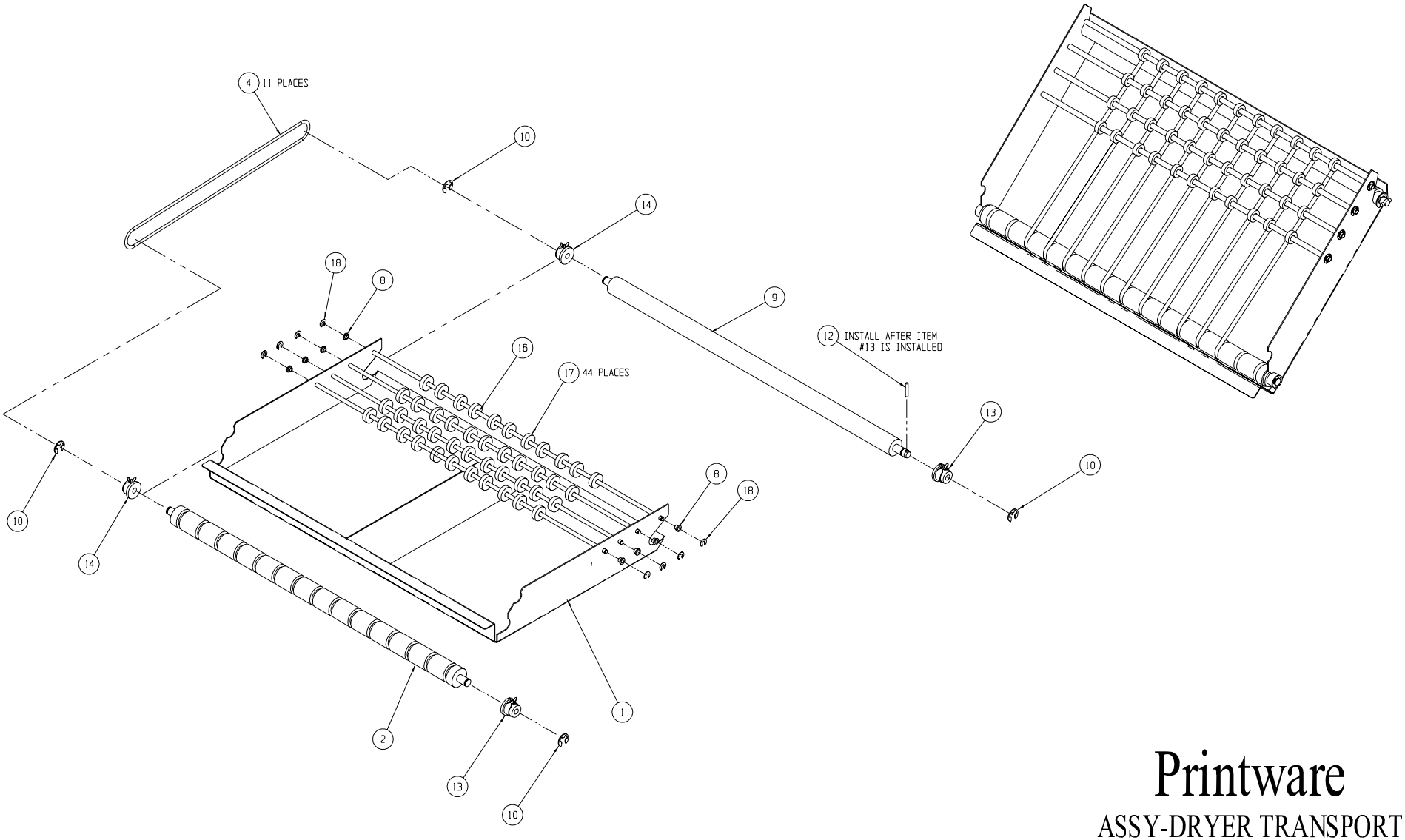
Assembly Number: 808228-002

ASSY-TRANSPORT, DRYER, ROLLER, FOAM

Revision: C

Find Number	Quantity Used	Component Number	Component Description
001	1	808229-001	RACK-PANEL ROLLER FOAM
002	1	806751-001	ROLLER-DRYER LOWER
004	11	901077-001	BELT-ENDLESS ROUND
008	8	900230-002	BEARING, NYLON SNAP-IN, .25" SHAFT
009	1	806747-001	ROLLER-DRYER UPPER
010	4	900229-019	E-RING SAE .375" SHAFT
012	1	901079-001	PIN-SPIRAL
013	2	806649-001	ASSY-FLANGED BEARING
014	2	806649-002	ASSY-FLANGED BEARING
016	4	807352-001	SHAFT-19.75" LONG
017	44	807351-001	ROLLER-FOAM
018	8	900005-002	RING-GRIP

Main Menu



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ASSY-DRYER TRANSPORT

808228-002 REVISION: C

Sheet 1 of 1

Printware Confidential

Assembly Number: 806925-002

ASSY-PUNCH SC BACHER 220

Revision: L

Find Number	Quantity Used	Component Number	Component Description
001	1	807415-002	ASSY-COMPRESSOR MODIFIED
002	1	901051-005	FITTING-TUBE QUICK STRAIGHT
003	2	901051-002	FITTING-TUBE QUICK UNION TEE
005	2	901051-008	FITTING-TUBE QUICK STRAIGHT
006	5	900940-003	TUBING-POLYURETHANE RED EA=FT
007	3	900940-004	TUBING-POLYURETHANE ORANGE
008	3	900940-005	TUBING-POLYURETHANE GREEN
009	1	900289-003	BUSHING-GROMMET
010	2	901053-001	MUFFLER-PNEUMATIC
011	1	807460-001	ASSY-PUNCH BACHER 220
012	1	901052-003	SOLENOID-AIR VALVE
013	1	807301-001	ASSY-CABLE SOLENOID
014	1	807691-001	PLATE FRONT DEFLECTOR
015	1	807692-001	PLATE-BACK DEFLECTOR
016	1	807615-001	TROUGH-PUNCH
017	3	900235-040	SCREW-SHC #8-32 X 5/8"
018	1	807661-001	TRAY-PUNCH
019	1	901283-001	HANDLE-PLASTIC TAPERED
020	1	806935-002	BRACKET-PUNCH MOUNTING NON-OPERATOR SIDE
021	1	806957-001	BRACKET-PUNCH MOUNTING-OP SIDE
022	1	807677-001	ASSY-PUNCH UPPER GUIDE
023	1	900236-002	SCREW-SOCKET HEAD SHOULDER #10-32 X .626"
025	30	900610-003	V-SEAL SHUTTER
026	2	807660-001	ASSY-ROLLER PUNCH EXIT
027	1	806936-001	BRACKET-PUNCH PLATE
028	4	900319-004	BEARING-NON METALLIC FLANGED
029	2	807614-002	ASSY-IDLER POST
030	1	900570-007	PULLEY-TIMING BELT, 18 GROOVES
031	1	807664-001	ASSY-PULLEY
032	1	900157-008	SCREW-SET CUP POINT #4-40 X .25"
033	1	901187-003	BELT-TIMING DBL SIDED 195 GRV
038	1	900160-004	WASHER-FLAT STEEL #6
039	4	900160-005	WASHER-FLAT STEEL #8
040	1	900651-022	WASHER-FENDER .5" X .189" X .125"
041	2	900651-020	WASHER-FENDER .749" X .203" X .156"
042	19	900047-000	WASHER-EXTERNAL LOCK #8
043	8	900445-006	SCREW-B.H. TORX #8-32 X .375"
044	7	900445-007	SCREW-B.H. TORX #8-32 X .5"
045	1	900236-008	SCREW-SOCKET HEAD SHOULDER #8-32 X .2505"
048	5	900233-003	NUT-LOCK #8-32
049	2	900233-001	NUT-LOCK #10/32
050	1	900288-006	SCREW-PHILLIPS PANHEAD #10-32 X 1.5"

Main Menu

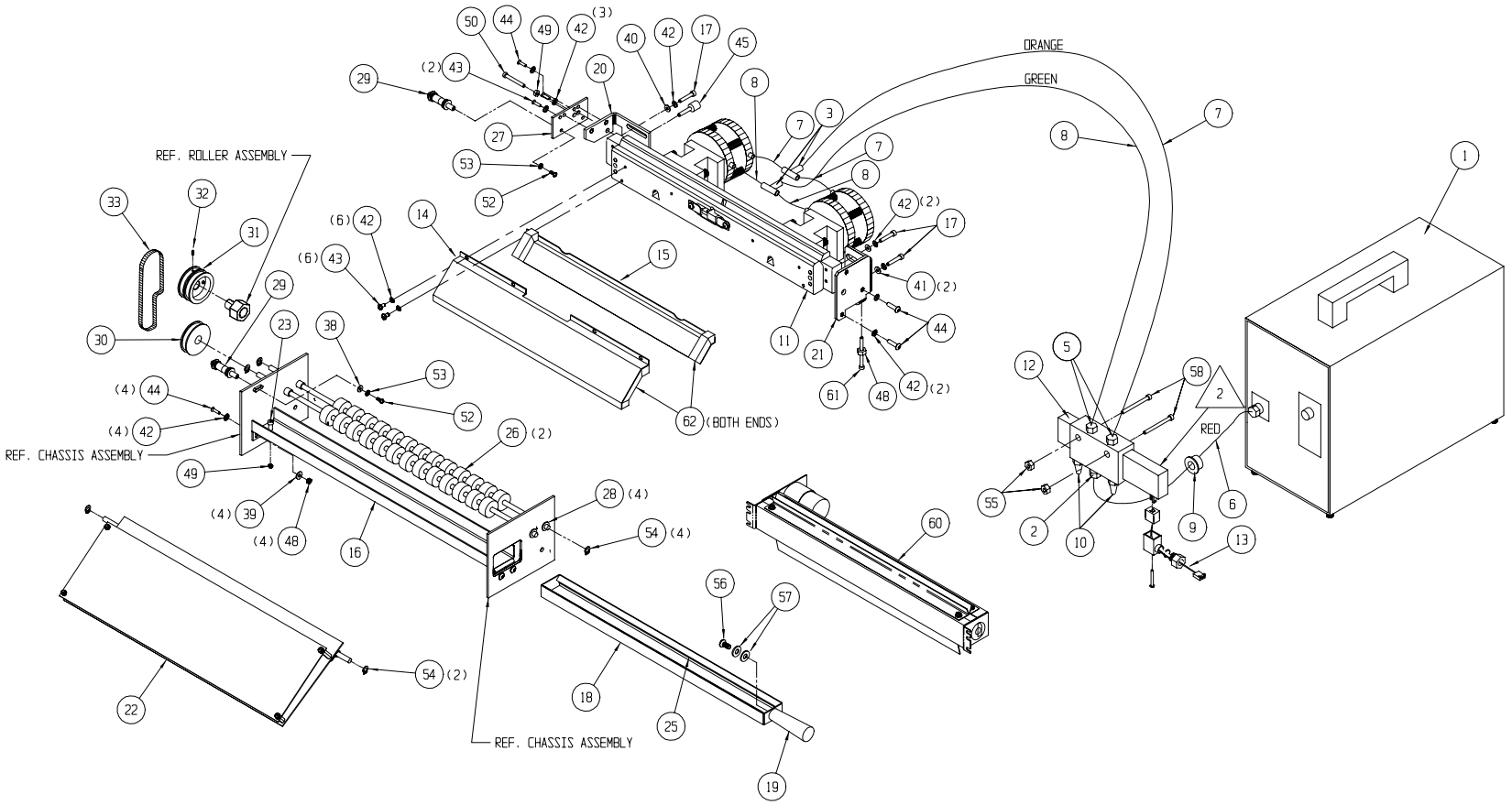
Assembly Number: 806925-002

ASSY-PUNCH SC BACHER 220

Revision: L

052	2	900445-004	SCREW-B.H.TORX #6-32 UNC X .375"
053	2	900047-002	WASHER-EXTERNAL LOCK #6
054	2	900005-002	RING-GRIP
055	2	900336-000	NUT-SELF LOCKING HEX #6-32
056	1	900445-001	SCREW-B.H. TORX 1/4"-20 X .5"
057	2	900608-001	WASHER-FLAT 1/4"
058	2	900287-025	SCREW-PHILLIPS PANHEAD #6-32 X 1.25"
060	1	806127-004	ASSY-CUTTER 13"
061	1	900235-041	SCREW-SHC #8-32 X 1-1/4"

Main Menu



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ASSY-BACHER PUNCH SC

806925-002 REVISION: I

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Assembly Number: 806926-002

ASSY-PUNCH SC PINBAR

Revision: T

Find Number	Quantity Used	Component Number	Component Description
001	1	807415-002	ASSY-COMPRESSOR MODIFIED
002	1	901051-005	FITTING-TUBE QUICK STRAIGHT
003	1	807460-002	ASSY- PUNCH PINBAR
005	2	901051-008	FITTING-TUBE QUICK STRAIGHT
006	5	900940-003	TUBING-POLYURETHANE RED EA=FT
007	2.5	900940-004	TUBING-POLYURETHANE ORANGE
008	2.5	900940-005	TUBING-POLYURETHANE GREEN
009	1	900289-003	BUSHING-GROMMET
011	2	901053-001	MUFFLER-PNEUMATIC
012	1	901052-003	SOLENOID-AIR VALVE
013	1	807301-001	ASSY-CABLE SOLENOID
014	1	807616-001	PLATE-FRONT DEFLECTOR
015	1	807617-001	PLATE-BACK DEFLECTOR
016	1	807615-001	TROUGH-PUNCH
017	1	900235-041	SCREW-SHC #8-32 X 1-1/4"
018	1	807661-001	TRAY-PUNCH
019	1	901283-001	HANDLE-PLASTIC TAPERED
020	1	806935-001	BRACKET-PUNCH MOUNTING NON-OPERATOR SIDE
021	1	806934-001	BRACKET-PUNCH MOUNTING OPERATOR SIDE
022	1	807677-001	ASSY-PUNCH UPPER GUIDE
024	1	900236-002	SCREW-SOCKET HEAD SHOULDER #10-32 X .626"
025	30	900610-003	V-SEAL SHUTTER
026	2	807660-001	ASSY-ROLLER PUNCH EXIT
027	1	806936-001	BRKT-PUNCH PLATE
028	4	900319-004	BEARING-NON METALLIC FLANGED
029	2	807614-002	ASSY-IDLER POST
030	1	900570-007	PULLEY-TIMING BELT 18 GROOVES
031	1	807664-001	ASSY-PULLEY
032	1	900157-008	SCREW-SET CUP POINT #4-40 X .25"
033	1	901187-003	BELT-TIMING DOUBLE SIDED 195 GROOVE
038	1	900160-004	WASHER-FLAT STEEL #6
039	4	900160-005	WASHER-FLAT STEEL #8
040	1	900651-022	WASHER-FENDER .5" X .189" X .125"
041	2	900651-020	WASHER-FENDER .749" X .203" X .156"
042	19	900047-000	WASHER-EXTERNAL LOCK #8
043	9	900445-006	SCREW-B.H. TORX #8-32 X .375"
044	7	900445-007	SCREW-B.H. TORX #8-32 UNC X .5"
045	1	900236-008	SCREW-SOCKET HEAD SHOULDER #8-32 X .2505"
047	3	900235-040	SCREW-SHC #8-32 X 5/8"
048	5	900233-003	NUT-LOCK #8-32
049	2	900233-001	NUT-LOCK #10/32
050	1	900288-006	SCREW-PHILLIPS PANHEAD #10-32 X 1.5"

Main Menu

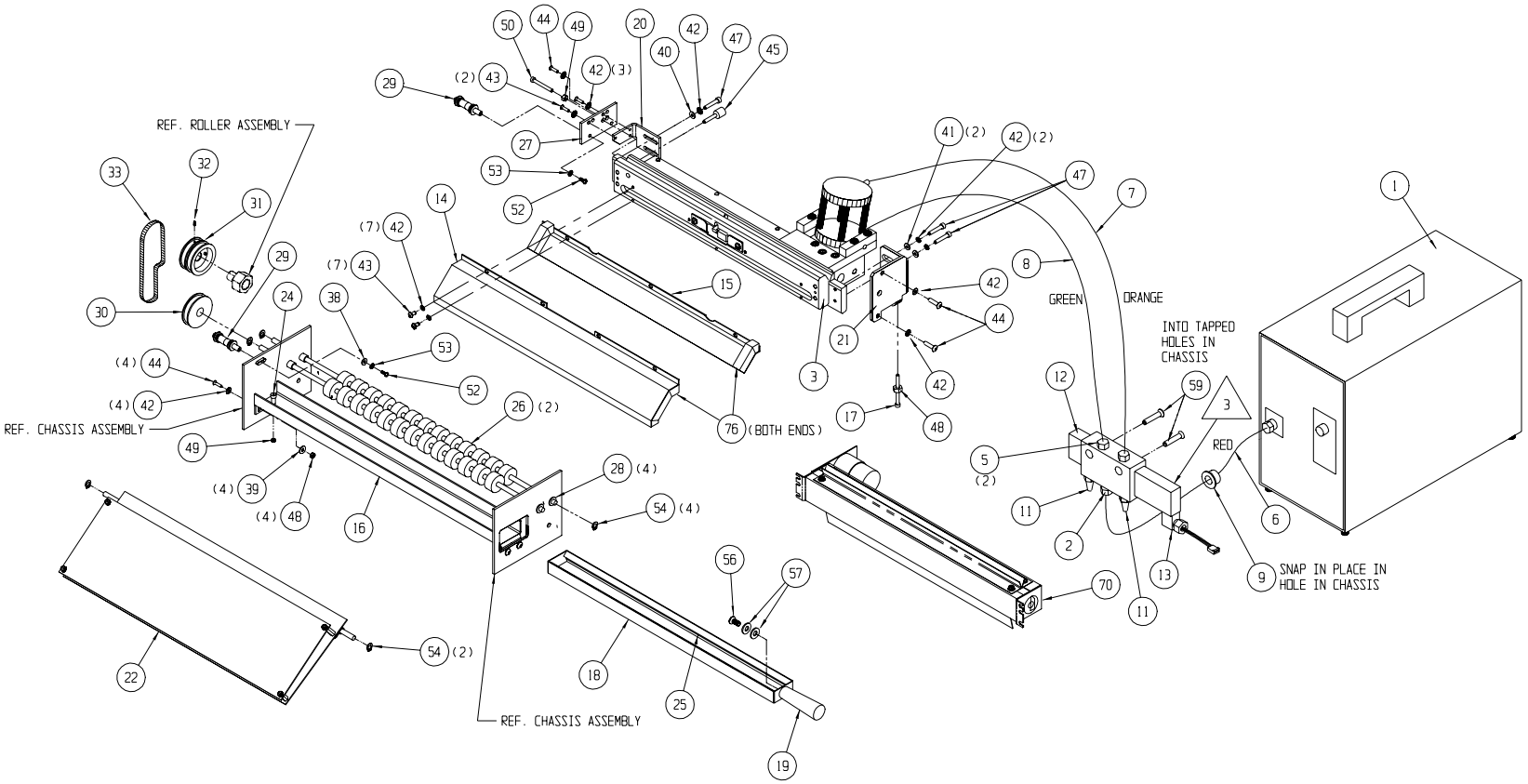
Assembly Number: 806926-002

ASSY-PUNCH SC PINBAR

Revision: T

052	2	900445-004	SCREW-B.H TORX #6-32 X .375"
053	2	900047-002	WASHER-EXTERNAL LOCK #6
054	6	900005-002	RING-GRIP
056	1	900445-001	SCREW-B.H. TORX 1/4"-20 X .5"
057	2	900608-001	WASHER-FLAT 1/4"
059	2	900287-025	SCREW- PHILLIPS PANHEAD #6-32 X 1.25"
070	1	806127-004	ASSY-CUTTER 13"

Main Menu



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ASSY-PINBAR PUNCH SC

806926-002 REVISION: S

Sheet 1 of 1

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Assembly Number: 807501-002

ASSY-PUNCH COMBO SC

Revision: L

Find Number	Quantity Used	Component Number	Component Description
001	1	807415-002	ASSY-COMPRESSOR MODIFIED
002	1	901051-005	FITTING-TUBE QUICK STRAIGHT
003	1	807460-004	ASSY-PUNCH COMBO
005	2	901051-008	FITTING-TUBE QUICK STRAIGHT
006	5	900940-003	TUBING-POLYURETHANE RED EA=FT
007	2.5	900940-004	TUBING-POLYURETHANE ORANGE
008	2.5	900940-005	TUBING-POLYURETHANE GREEN
009	1	900289-003	BUSHING-GROMMET
011	2	901053-001	MUFFLER-PNEUMATIC
012	1	901052-003	SOLENOID-AIR VALVE
013	1	807301-001	ASSY-CABLE SOLENOID
014	1	807616-001	PLATE-FRONT DEFLECTOR
015	1	807617-001	PLATE-BACK DEFLECTOR
016	1	807615-001	TROUGH-PUNCH
017	1	900235-041	SCREW-SHC #8-32 X 1 1/4"
018	1	807661-001	TRAY-PUNCH
019	1	901283-001	HANDLE-PLASTIC TAPERED
020	1	806935-001	BRACKET-PUNCH MOUNTING NON-OPERATOR SIDE .32"
021	1	806934-001	BRACKET-PUNCH MOUNTING OPERATOR SIDE
022	1	807677-001	ASSY-PUNCH UPPER GUIDE
024	1	900236-002	SCREW-SOCKET HEAD SHOULDER #10-32 X .626"
026	2	807660-001	ASSY-ROLLER PUNCH EXIT
027	1	806936-001	BRACKET-PUNCH PLATE
028	4	900319-004	BEARING-NON METALLIC FLANGED
029	2	807614-002	ASSY-IDLER POST
030	1	900570-007	PULLEY-TIMING BELT 18 GROOVES
031	1	807664-001	ASSY-PULLEY
032	1	900157-008	SCREW-SET CUP POINT #4-40 X .25"
033	1	901187-003	BELT-TIMING DOUBLE SIDED, 195 GROOVE
038	1	900160-004	WASHER-FLAT STEEL #6
039	4	900160-005	WASHER-FLAT STEEL #8
040	1	900651-022	WASHER-FENDER .5" X .189" X .125"
041	2	900651-020	WASHER-FENDER .749" X .203" X .156"
042	19	900047-000	WASHER-EXTERNAL LOCK #8
043	9	900445-006	SCREW-B.H. TORX #8-32 X .375"
044	7	900445-007	SCREW-B.H. TORX #8-32 X .5"
045	1	900236-008	SCREW-SOCKET HEAD SHOULDER #8-32 X .2505"
047	3	900235-040	SCREW-SHC 8-32 X 5/8
048	5	900233-003	NUT-LOCK K #8-32
049	2	900233-001	NUT-LOCK K, #10/32
050	1	900288-006	SCREW-PHILLIPS PANHEAD #10-32 X 1.5"
052	2	900445-004	SCREW-B.H.TORX #6-32 X .375"

Main Menu

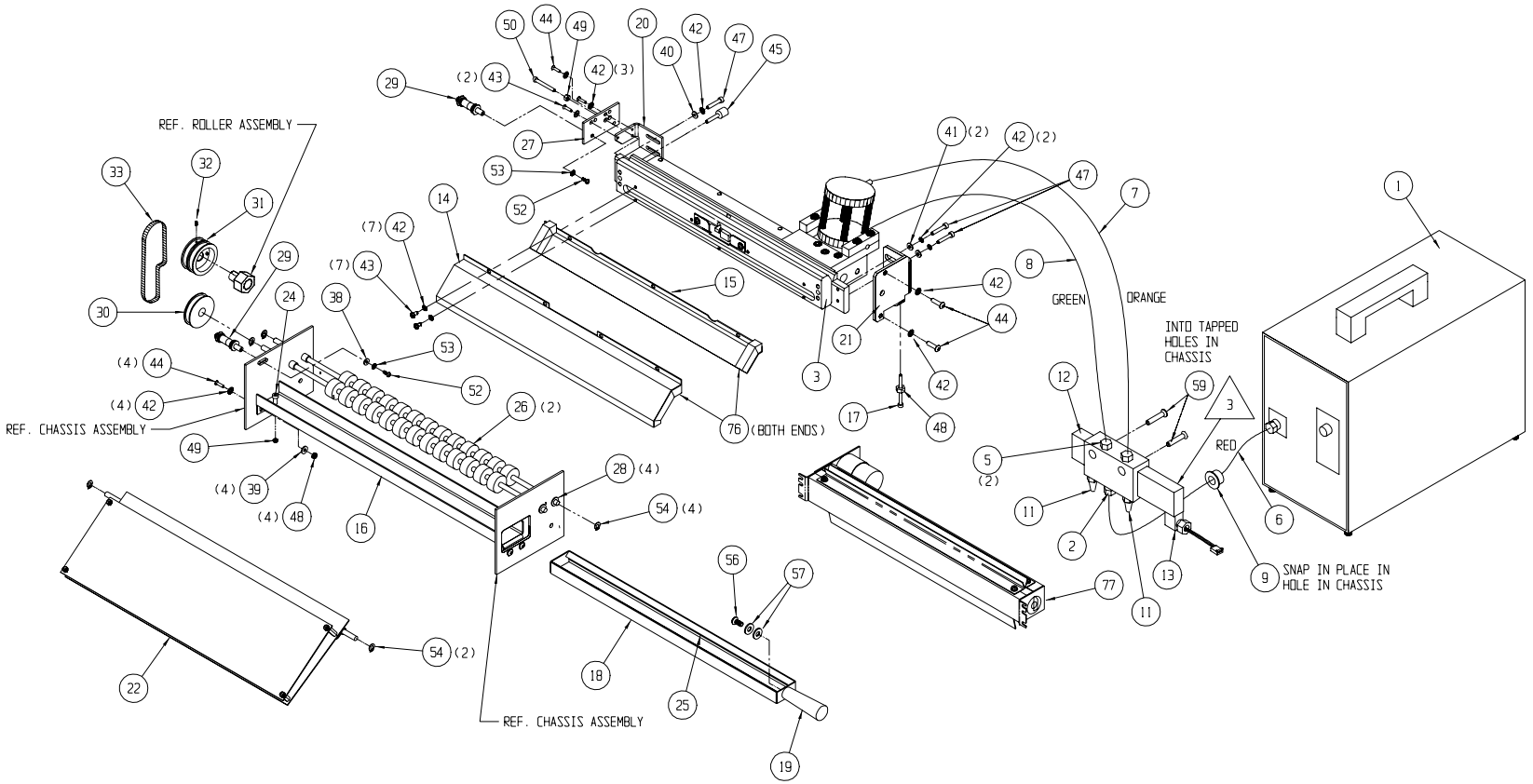
Assembly Number: 807501-002

ASSY-PUNCH COMBO SC

Revision: L

053	2	900047-002	WASHER-EXTERNAL LOCK #6
054	6	900005-002	RING-GRIP
056	1	900445-001	SCREW-B.H. TORX 1/4"-20 X .5"
057	2	900608-001	WASHER-FLAT SAE 1/4"
059	2	900287-025	SCREW-PAN PILLIPS PANHEAD #6-32 X 1.25"
077	1	806127-004	ASSY-CUTTER 13"

Main Menu



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ASSY-COMBO PUNCH SC

807501-002 REVISION: K

Sheet 1 of 1

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Printware, Inc. SALES ORDER FORM

DATE:_____ **SALES ORDER NO.:_____**

HOW RECEIVED:

FAX _____ PHONE _____ E-MAIL _____ BY: _____

CUSTOMER P.O. NO. : _____ CUSTOMER I.D. NO.: _____

SOLD TO: _____

SHIP TO: _____

_____

QTY	PART NO.	DESCRIPTION	PRICE	(DISC)	NET

REQUESTED SHIP DATE: _____ **SHIP VIA: _____**

TERMS: _____ **TAX EXEMPT: Y or N**

PHONE NO.: ( ) _____ **STATE: _____**

CREDIT CARD: VISA MC **EXEMPTION NO.: _____**

CARD NO.: _____ **EXP. DATE _____**

ADD'L COMMENTS:

For part cost and availability, please call the Sales Administrator at (651) 456-1446. For questions regarding part applicability please call Customer Service at (651) 456-1400
To place your order online please email this form to: ceh@printwareinc.com or FAX this form to Printware, Inc. (651) 454-3684.